



Proceedings

**19th & 20th
February 2018**

Organized by

Department of Computer Science and Engineering
SRM Institute of Science and Technology
Kattankulathur Campus, Chennai, TamilNadu, India.

In Association with

Melange Publications
Puducherry, India.

**PROCEEDINGS OF
INTERNATIONAL CONFERENCE
ICRDEST-2018**

**INTERNATIONAL CONFERENCE ON
RESEARCH DEVELOPMENT IN
ENGINEERING SCIENCE & TECHNOLOGY**

19th & 20th February, 2018

Organized by



**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
KATTANKULATHUR CAMPUS, CHENNAI
TAMILNADU, INDIA**

In Association with



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MESSAGE FROM KEYNOTE SPEAKER



Prof. Dr. Ku Ruhana Ku Mahamud

It is interesting to see that ICRDEST'18, in its effort to promote research has accepted many participants to present their papers that have delved into many interesting aspects of engineering science and technology which includes computational intelligence. The conference will enable participants to disseminate their research findings, getting valuable feedbacks and permit interaction which will create networking.

I particularly like the area of study which focuses on swarm intelligence, a concept which is employed in work on artificial intelligence. To survive in tough and wild nature, creatures need to act intelligently. One of the most observed behavior between various insects and animals is swarm demeanor. Collaborative behaviour enables the swarm of creatures to solve complex tasks which are not solvable by individual. Several metaheuristic algorithms are discussed in chronological order with a highlight on one of the most prominent algorithm, the Ant Colony Optimization.

I would like to extend my greatest appreciation to Melange Publications for inviting me as a keynote speaker and sponsoring the conference. Congratulation goes to the Department of computer Science and Engineering of SRM Institute of Science and Technology for organizing the conference. Keep up the good work.

**Editor-in-Chief
Journal of Information and Communication Technology
Malaysia.**

MESSAGE FROM KEYNOTE SPEAKER



Mr. Md. Shahid

I am pleased to note that the International Conference on Research Development in Engineering Science and Technology (ICRDEST-2018) is being organized by SRM Institute of Science and technology, Kattankulathur Campus, Chennai, TN. The International Conference is a multidisciplinary event that covers the entire stream of Engineering.

This conference brings together Academicians, Research Scholars, and Engineering Students from different parts of India and gives them a wonderful opportunity to get and share new ideas. I firmly believe that the conference would give a great chance to showcase the participant's talents.

I congratulate the ICRDEST2018 organizers for their passion with which they have gone about organizing this conference.

I wish the conference a great success!

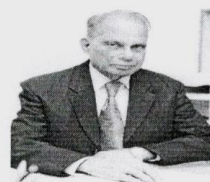
Scientist
Aeronautical Development Establishment
DRDO, Bangalore.

MESSAGE FROM PRO - VICE CHANCELLOR

Dr. T.P. Ganesan
Pro VC (Planning and Development)



MESSAGE



I am happy to note that the Department of Computer Science and Engineering, SRM Institute of Science and Technology is organizing an International Conference on Research Development in Engineering Science & Technology (ICRDEST- 2018) on 19th and 20th February, 2018.

The conference is related to the thrust areas of Computer Science Engineering, Information Technology , Software Engineering , Electronics and Communication Engineering , Electrical and Electronics such as Wireless network, Software defined networks, Artificial Intelligence , Data mining and Information Security.

The current research trends such as Internet of Things has evolved due to convergence of multiple technologies, including ubiquitous wireless communication, real-time analytics, machine learning, commodity sensors and embedded systems. Cloud computing another field of current research provide shared computer processing resources and data to computers and other devices on demand. Green computing and machine intelligence are hot research topics.

The conference serves as a platform to share and provide a good opportunity to the Scholars, Academicians, Industrial experts and Students to exchange their ideas and findings in the Current research areas to excel in their chosen field of specialization.

I wish the conference a great success and extend my good wishes to all the members associated with the conference.

T.P. Ganesan
6.2.18
Pro- Vice Chancellor

MESSAGE FROM DIRECTOR

Prof. C. Muthamizhchelvan, Ph.D.
Director,
Faculty of Engineering and Technology
Email: director.et@srmuniv.ac.in



MESSAGE

We live in the Intellectual world of Abstraction driven by the Technology. The innovation has grown to such a level where a common man holds a high Intel product without a basis knowledge on what makes it run.

Technology inventions leads to the Product innovations and it captures a large share of market that nearly control the economies of the world. Countries that stepped well ahead in next gen technologies have seen a rapid growth in their economies.

Engineering Sciences and Technology are always an enthusiastic areas for the researchers and it is a right mix for conferencing among the academic community and industry experts.

I appreciate your efforts in organizing this International conference on Research Development in Engineering Science and Technology (ICRDEST – 2018) during 19th and 20th February 2018. It would be great to have the wise minds sharing their expertise and knowledge through this event.

I wish all success for the efforts of the entire team in bringing this to light.


(Prof. C. Muthamizhchelvan)
Dr. C. MUTHAMIZHCHELVAN
Director
Faculty of Engineering & Technology
SRM Institute of Science and Technology
SRM Nagar, Kattankulathur - 603 203.
Kancheepuram Dist, Tamil Nadu, India.

MESSAGE FROM HEAD OF THE DEPARTMENT



Dr. B. Amutha

This is a matter of immense pleasure to publicize that the International Conference ICRDEST-2018, is going to be organized by the Department of Computer Science & Engineering, SRM Institute of Science & Technology during February 19,20, 2018 at our premises. The International Conference on Research Development in Engineering Science & Technology discussions and the publication of the conference proceedings will bring opportunities among the academicians, corporate delegates, research scholars and students to present their innovative ideas, most up-to-date findings, and technical proficiency in the various fields of Research trends in Computer Science and its Applications.

It is certainly heartening to note that the event has attracted academicians, research scholars, students and industry experts from almost every corner of the country. I am convinced that the discussions of this conference will contribute new dimensions in the field of Computer Science and its Applications studies.

I take this opportunity to congratulate the organizing team for the effort taken by each one of them to make this International Conference a reality. I wish them all a grand success.

Professor
Department of Computer Science and Engineering
SRM Institute of Science and Technology
Kattankulathur Campus.

MESSAGE FROM CONVENER



Dr. R. Annie Uthra

The department of Computer Science and Engineering of SRM Institute of Science and Technology is organizing the 'International Conference on Research Development in Engineering Science and Technology 2018' during 19-20th February 2018. ICRDEST'18 is to provide a cross-disciplinary venue for researchers and practitioners to address the rich space of research and technology in various fields like computer science, electronics, electrical etc. In the present era of Internet of Things, cloud computing, intelligent techniques have become more relevant. ICRDEST'18 will provide a platform for sharing and discussing these emerging ideas. The three invited talks and discussions in the paper presentations will provide ample knowledge and exchange of ideas, innovative developments and information among the conference participants.

This conference proceedings carries 111 papers selected for the conference. The articles in the proceedings include topics ranging from intelligent techniques to IoT in real world applications, which would be good resource for those who would like to update their knowledge on the emerging fields like data analytics, cloud computing, IoT, neural networks, Zigbee communications etc.

I thank the Almighty for showering His blessings on us in all our endeavours. We are very much thankful to our sponsors, Melange Publications. We express our sincere thanks to our Chancellor and Director(E&T) for providing financial support and guidance to organize this conference. We thank our Vice Chancellor, Registrar for their continuous support and encouragement.

Special thanks to the Keynote Speakers, Dr. Ku Ruhana, Chief Editor of the Journal of Information and Communication Technology & Professor, School of Computing, University Utara Malaysia (UUM), Malaysia, Dr. Md. Shahid, Scientist, Aeronautical Development Establishment, DRDO, Bangalore, Mr. Baraneedhara Karthikeyan, Founder - Director, Skylim Infotech Pvt Ltd., Chennai for sharing their views on current research topics.

I thank the faculty of Computer Science and Engineering for spending their time and providing support for organizing this conference.

**Associate Professor
Department of Computer Science and Engineering
SRM Institute of Science and Technology
Kattankulathur Campus.**

MESSAGE FROM CONVENER



Dr. A. Jeyasekar

Welcome to ICRDEST-2018

The International Conference on Research Development in Engineering Science and Technology has established itself as worldwide reference for the dissemination of high quality research in all aspects of engineering science and technology and fostering interaction and exchange of research ideas. The purpose of this conference is to provide an international forum for scientists and engineers from academia and industry to exchange and share their experiences, research results and new idea on hot. This is a very refreshing and much needed education drive in modern India and digital India.

ICRDEST-2018 was fortunate to attract a high interest among the research community across the nation and worldwide. Among the large number of research article submitted for conference, limited manuscripts were accepted for publication after the tight review by the technical committee. We are grateful to all authors who trusted us with their work, without them there would be no conference. Since the conference is conducted in association with Melange publications, the papers accepted for the conference after the tight review is recommended for journals from various publishers.

I take this opportunity to thank all organizing committee and the participants who have come from various parts of the country and across the globe and we consider it as our privilege and honor to have you all over here.

Associate Professor
Dept. of CSE/FET
SRM Institute of Science and Technology
Kattankulathur Campus.

MESSAGE FROM CONVENER



Dr. G. Niranjana

It is my great pleasure to welcome you to the 2 days International Conference on Research Development in Engineering Science and Technology (ICRDEST 2018). It has been a real honor and privilege to serve as the Convener of the conference.

ICRDEST 2018 provides a multi disciplinary platform for academicians and researchers to discourse the rich space of engineering, science and technology. The conference spans two days consisting of keynote addresses and paper presentations. The three Keynote presentations and planned eight technical sessions will provide ample opportunities for discussions, debate, and exchange of ideas and information among conference participants.

I thank the Almighty for showering his blessings on us in all our endeavours. I am very much thankful to our sponsors, Melange Publications. I express my sincere thanks to our Chancellor and Director(E&T) for providing financial support and guidance to organize this conference. I thank our Vice Chancellor, Registrar for their continuous support and encouragement. My sincere thanks extend to the General Chair of the ICRDEST steering committee, for her vision and leadership. Special thanks to the Keynote Speakers Dr. Ku Ruhana, Chief Editor of the Journal of Information and Communication Technology & Professor, School of Computing, University Utara Malaysia (UUM), Malaysia, Dr.Md. Shahid, Scientist, Aeronautical Development Establishment, DRDO, Bangalore, Mr. Baraneedhara Karthikeyan, Founder - Director, Skylim Infotech Pvt Ltd., Chennai for sharing their views on current research topics. I also thank the panel moderators for their support. ICRDEST 2018 would not have been possible without the enthusiasm and hard work of a number of colleagues. I would like to express our appreciation to all Program Committee Chairs for their valuable contribution in assembling the high quality conference program. A conference of this size relies on the contributions of many volunteers, and we would like to acknowledge the efforts of our team members. I am grateful to all the authors who trusted the conference with their work.

We look forward to an exciting days of insightful presentations, discussions, and sharing of technical ideas with colleagues from various institutions. We thank you for attending the conference and we hope that you enjoy your visit to Chennai, the gateway of South India.

Assistant Professor(S.G)
Department of Computer Science and Engineering
SRM Institute of Science and Technology
Kattankulathur Campus.

MESSAGE FROM PUBLICATION CHAIR



Dr. S. V. Manikanthan
Director
Mélange Publications

Dear Authors, Reviewers and Readers,

It gives me great pleasure to welcome you to International Conference on Research Development in Engineering Science & Technology (ICRDEST-2018) which I have acted as Publication Chair.

Editorials and commentaries play a key role in exploring more contentious issues in a balanced way, allowing the reader to make an informed decision on how or whether their clinical practice should be altered. It is important we have a good balance of different article type within the publication. These papers underwent a rigorous two-round review process and were recommended for acceptance to be published by the editorial board of the ICRDEST. It helps to improve the overall quality and visibility of conference publications through a rigorous review. This objective clearly has been achieved reading through this special issue. ICRDEST should lead to a timelier exchange of new ideas, foster rapid dissemination of recent works via an integrated forum for both publications and presentations, and further expand and grow our community. Many individuals have committed their time and effort and I would like to thank them for their excellent work.

Lastly, I should thank all our submitting authors, Dignitaries who have toiled in the production of their work, and have chosen International Conference on Research Development in Engineering and Technology in support with Melange Publications. The success and reputation of ICRDEST reflects the outstanding work by our reviewers and authors who are dedicated to publication of only the best quality papers.

Publication Chair
Mélange Publications.

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Melange Publications



International Conference on Research Development in Engineering Science & Technology

(ICRDEST-2018)



CONTENT

SL. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
1	CS-188	Support Vector Regression for Residential Load Forecasting in Smart Grid System	S.M. Sulaiman	1
2	EC-36	Advance Features and Mobility Management of Mobile WiMAX	Akhil Augustine	2
3	EC-37	Equalization of The Current in a Three-Phase Electrical Power System	Akhil Augustine	3
4	EC-38	Vitality Efficient Smart Home Automation System	R.Rajendra Kumar	4
5	CS-14	Improvised File Transfer Rate for Similar Data Transmission Using Pattern Matching	NM. Jeya Nachiaban	5
6	CS-15	An Energy Efficient Hierarchical Routing Protocol For Wireless Sensor Network Using C ² R Approach	C Jothikumar	6
7	CS-18	Short Texts Analysis Based on Semantic Knowledge	P. Sai Jeswanth Reddy	7
8	CS-20	Feature Selection for Yield Prediction Using Boruta Algorithm	Maya Gopal P.S	8
9	CS-25	Applicability of Trip Chaining Method on Smart Cities Deployment	Avinash Kapuganti	9
10	CS-26	A Survey on Twitter Data Analysis	Akhil Kumar Palla	10
11	CS-27	Study on Big Data Analytics Structures for Business Novelty Through Strategic Advertising	T.A. Mohanaprakash	11
12	CS-28	A Survey on Predictive Analysis in Employment Trends	Nita Radhakrishnan	12



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
13	CS-29	Survey on Identification and Classification of Waste for Efficient Disposal and Recycling	Adhithya Prasanna .M	13
14	CS-30	A Survey On A New Revocable Scheme For Multi-Server Architectures	Amrita Singh	14
15	CS-32	Data Analysis Using Deep Neural Networks	Kushal Chakraborty	15
16	CS-34	Extensive Survey on Congestion Avoidance for Vehicular Traffic System	Balaji NS	16
17	CS-35	Re-Thinking River Diversion Projects - A Political Ecology Perspective	Neha Singh	17
18	CS-36	Changing Mechanisms Of Enterprise Security (Comparing Beyond Corp with Prevalent Network Security Mechanisms) (Survey Paper)	B.Amutha	18
19	CS-38	Offline Smart phone Based Human-Fall Detection System	Suryanarayana Adda	19
20	CS-39	Survey On Grey Wolf Algorithm In Resource Allocation	Amrendra Anand Jha	20
21	CS-40	Video Recommendations: Suggesting New Approaches	Nikhar Pradhan	21
22	CS-42	Business Driven Automation Testing Framework	R. Anand	21
23	CS-46	Anomaly Based Host Intrusion Detection System Using Analysis of System Calls	Shijoe Jose	22
24	CS-47	Review On Foreground Artificial Intelligence In Games	Rajjeshwar Ganguly	23



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
25	CS-49	Efficient Mining and Recommendation of Extensive Data Through Collaborative Filtering in E-commerce: A Survey	N. Naveen	24
26	CS-51	A Survey Paper on Suicide Analysis	Ranjitha Korrapati	25
27	CS-52	Facial Expression Recognition Using Convolutional Neural Networks	Ashlesha Vaidya	26
28	CS-53	Study of Application of Software Defined Network To Real Networks	T. Manoranjitham	26
29	CS-56	Secure and Efficient Query Processing Using Randomized Encryption and De-duplication on the Cloud	Mohith Lalita Kumar Parvataneni	27
30	CS-61	Predicting Close Stock Price	Ushasukhanya. S	28
31	CS-63	Detection of Microaneurysms and Hemorrhages in Fundus Image for Glaucoma Diagnosis	R. Shanthi	29
32	CS-64	Optical Compute Engine Using Deep CNN	Zainab Zaveri	30
33	CS-65	Pre-Authentication Approach Towards Proxy Re-encryption in Cloud Data Context	Amish Singh	31
34	CS-66	Heart Disease Prediction Using Machine Learning Techniques: A Survey	Ayantana Dandapath	32
35	CS-67	Secure Data Retrieval In Cloud Using Multiple Keys: A Survey	Raghavan S	33
36	CS-68	An Efficient Automated Road Region Extraction from High Resolution Satellite Images using Improved Cuckoo Search with Multi-Level Thresholding Schema	J. D. Dorathi Jayaseeli	34



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
37	CS-69	A Comprehensive Survey of Research based on extraction of Opinion Words and Opinion Targets From Customer Reviews	Harinder Kaur	35
38	CS-70	Enhancing the Quality-of-Service in Multipath Wireless Networks	K. SaiPraneet	36
39	CS-71	Genetically Modified Organisms: Present and Future Implications on Environment, Health and Economy	Saurabh Vijayvergiya	37
40	CS-73	Survey on Short-Term Load Forecasting Using Hybrid Neural Network Techniques	Shaive Dalela	38
41	CS-74	Digit Recognition using Deep Learning	Shashank Mishra	39
42	CS-77	A Survey on the Recent Developments in the Area of Drought-Forecasting	Vardaan Kishore	40
43	CS-79	A Review on Road Extraction using Remote Sensing Data	Niveditha Kumaran	41
44	CS-80	A Greedy File Merging Algorithm for Handling Small Files in HDFS	Jayalakshmi D S	41
45	CS-81	A Survey Of Road Traffic Prediction with Deep Learning	T. Manoranjitham	42
46	CS-82	A Survey on Tradeoff Between Storage and Repair Traffic in Distributed Storage Systems	D. Sowmia	43
47	CS-85	Pseudo Random Number Generators	Rajdeep Kundu	44
48	CS-87	Practical Insights into Developing Applications with Microservice Architecture: A Survey	Nikhil Satish	45

SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
49	CS-88	Credit card Fraud Detection Using Machine Learning models and Collating Machine Learning models	Navanshu Khare	46
50	CS-89	A Brain Computer Interface For Automation control	P.Saranya	47
51	CS-90	Ergonomic System to Assess Knee Joint Health	Odulapalli Roop Anudeep	48
52	CS-91	Huffman Coding Packet Balancer Based Data Compression Techniques in Wireless Sensor Network	Sandeep Nukala	49
53	CS-92	Airport Trends Analytics Engine Using the ARIMA Model	Chitransh Rajesh	50
54	CS-96	Sentiment Analysis on Twitter: A Survey	Rohith.V	51
55	CS-101	A Survey Face Spoofing Detection Using Various Classifier	Hari Krishna Ippili	52
56	CS-138	Application of XGBoost for the Prediction of Cyclonic Severity in Bay of Bengal	S. Karthick	53
57	EC-01	A Novel Approach for Visual Speech Recognition using Convolution Neural Network: An Aid to Speech-impaired people	C. Manojkumar	54
58	EC-03	Performance Analysis of Different Designs of D Flip Flop	K.Archana	55
59	EC-05	Connected Lighting System with ZigBee Control Board and PWM	Aishwarya Chandrasekhar	55
60	EC-06	An Assistive Bag For Blind and Deaf	Joselin Retna Kumar	56
61	EC-07	Security System of an Electric Motorcycle Based on GSM & ZigBee Communication	Arkoalo Palchaudhuri	57



International Conference on Research Development in Engineering Science & Technology

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
62	EC-08	Design and Analysis of a Wide Band Rectangular Slot Loaded Planer Microstrip Antenna	Raj Gaurav Mishra	58
63	EC-09	Health Monitoring Robot System	R.Lavanya	58
64	EC-10	IoT Based Smart Waste Management In Smart City	Shivajyothi Gopireddy	59
65	EC-11	Hybrid Hyper Chaotic System and Cellular Automata-based Color Image Block Wise Encryption and Decryption	K. Reya	60
66	EC-12	Attendance Marking System using Face Recognition & RFID and prevention of Examination Malpractice System	M. Maria Dominic Savio	60
67	EC-13	Artificial Intelligence Based On Agent Based Modelling With Cyber Security For Remote Operated Vehicle On Dangerous Terrain	Priyanka Kumari	61
68	EC-14	IoT Based Industrial Smart Grid Monitoring Using MQTT Protocol	Manasi Giridhar	62
69	EC-15	Air and Water Quality Monitoring Through IoT By Using Aquatic Surface Drone	Ch. Pavan Kumar	63
70	EC-16	Implementation of 32 bit CRC Using 180nm Technology in Device to Device Communication	C. Bhavana	64
71	EC-17	Energy efficient routing and peer to peer trust assessment for increasing the network life time in delay tolerant network	S. Murugaveni	65
72	EC-19	A Secure Privacy Preserving Data Aggregation Scheme Based On Bilinear ElGamal Cryptosystem For Wireless Communication	N. Himaja	66

SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
73	EC-20	Detection of People Using Ultrasonic Sensor	N.Showme	67
74	EC-21	A Secure End-To-End Solution For IoT Based Smart Home	A. Christie Aiswarya	68
75	EC-22	A Compact G and U Strip Folded Planar Multiband Antenna for Wireless Application	P. Prabhu	69
76	EC-24	Advanced Vehicle Security Control And Accident Alert System	Jesline James	70
77	EC-25	Optical Reversible Network and Reconfigurable Router using Micro Ring Resonator	T. Theresal	71
78	EC-27	A Low Cost, Data-Oriented Messaging Mechanism with Efficient Task Scheduling for Single Core Processors in IIoT applications	Selvakumaran D	72
79	EC-28	A 79GHz Adaptive Gain Low Noise Amplifier for Radar Receivers	J. Manjula	73
80	EC-30	Design of Memristive Hopfield Neural Network Using Memristor Bridges	Monurajan P	74
81	EC-31	IoT Based Smart Street Lighting System	Annareddy Sravani	75
82	EC-32	Implementation of SIFT for Detection of Electronic Waste	A Roshna Meeran	76
83	EE-01	Doubly Fed Induction Generator based Wind Energy Conversion System using Matrix Converter with Model Predictive Controller	B.Kanagasakthivel	77
84	IT-01	Prediction of Passwords based on Affinity between Personal Information and Passwords	P. Sasirekha	78



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
85	IT-04	Outlier Detection using Clustering Techniques	Srividya	78
86	IT-10	Authentication and Overhearing to Prevent Internal and External Attacks in WSN	Siri Maidhili R	79
87	CS-102	Secured and Privacy Aware Content Sharing in Cloud	NamballaVenkata Lakshmi Narayan	80
88	CS-113	Examining Heuristics for the K-Centers Problem	Vikas S. Shetty	80
89	CS-130	Smart Recycle Trashinan IOT Management Systemfor Smart City	Manoj Kumar Naidu Katta	81
90	CS-136	Technological Adoption in the Agriculture Sector for Societal Upliftment in India	Pooja Rajesh Chellani	82
91	CS-179	An Efficient Automated Road Region Extraction from High Resolution Satellite Images using Improved Cuckoo Search with Multi-Level Thresholding Schema	J.D. DorathiJayaseeli	83
92	CS-180	Prediction of Electricity Consumption in India	Satyam Verma	84
93	CS-31	Analysis of Statistical Data Aggregation Schemes In Mobilesensing Applications	K. R. Jansi	85
94	CS-48	Network Anomaly Detector using Machine Learning	Ashwin Pranesh	86
95	CS-83	Sentiment Analysis Using Machine Learning Technique Through Twitter Streaming API	P. Akilandeswari	87
96	CS-93	Advanced Graphical Passwords Using Captcha	S. Prabhakaran	88
97	CS-95	Traditional vs Computerised Methods to Recruit Football Talents in Soccer: A Review	Mohanraam. S	89



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
98	CS-111	Effective Stack overflow Tag Prediction and Analysis using Big Data	R Lavanya	90
99	CS-146	Manipulation of Knowledge Representation by using Propositional Logic	Vaishnavi Moorthy	91
100	CS-149	Human Activity Recognition using Web Based Search Engines and Computer Vision API for Smart Homes	Priya.S	92
101	CS-150	Hadoop Framework Modelling for Monitoring Over Large-Scale Coal Plant Processes	P. AshwatSai	93
102	CS-157	Detection of Node Failure Localization in Communication Networks	Nidhi Shekhawat	94
103	CS-168	Design and Implementation of Smart and Low Cost Multi-task Farming System Using Arduino	M. Rajasekaran	95
104	IT-09	Improving the Efficiency of Container Management Using Docker	Celina Sunder Singh	96
105	CS-104	Advanced Route Recommendation System	D.Viji	97
106	CS-105	Student Performance Enhancement Through Educational Data Mining	D.Viji	98
107	CS-72	An Extensive Survey on Prominence of Hadoop Map Reduce in BIG DATA Processing	Sakshi Poddar	99
108	CS-94	Performance comparison of machine learning algorithms analyzing patterns of neural response to object categories	U.M. Prakash	100
109	CS-175	Aadhar Verification using Salt and Pepper	R. Nikhil Ram Reddy	101



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
110	EC-18	IoT- Save The Community Project	N.Deepa	102
111	EC-26	Brake Failure Detection And Electronic Auxiliary Braking System	N. Deepa	103
112	CS-02	Predicting Students' Performance Using Bayesian Classification Algorithm	J.Prathipa	104
113	CS-23	Recommender System Based on User's Transaction and Browsing History Using Text Analysis	Sindhu C	105
114	CS-24	Aspect Based Sentiment Analysis of Amazon Product Reviews	Sindhu C	106
115	CS-41	A Survey on IoT Based Health Care Monitoring Systems And The Security Challenges	Binnu Alex	107
116	CS-50	Secure Communication Through Internet of Things in Industries - A Survey	Jeel Rachchh	108
117	CS-60	Comparative Analysis of Malware Detection Using Machine Learning	Vignesh S	109
118	CS-33	Audio Hiding Using Adaptive Image Filtering and Adaptive Image Segmentation Based Image Steganography	Iniyan S	110
119	CS-97	Development of ArcPy based Customized tool in GIS for Seismic Information System	Sreenivasan Narayanan	111
120	CS-98	Survey on Early Detection of Autism Using Data Mining Techniques	B. Ida Seraphim	111
121	CS-99	Cloud Computing Storage Through Dual Protection	B. Ida Seraphim	112
122	CS-112	A Comprehensive Study on Sarcasm Detection Techniques in Sentiment Analysis	Sindhu. C	113



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
123	CS-115	Survey of Extractive Text Summarisation Techniques	Kandukuru Sai Bhavana	114
124	CS-116	Implementation of Magic Mirror using Raspberry Pi 3	S.Girija	114
125	CS-117	Approaches to Clustering in Customer Segmentation	Shreya Tripathi	115
126	CS-122	Inappropriate Post Removal From Social Networking Sites	D. Viji	116
127	CS-134	Smart Search History Based On a Hybrid Clustering Algorithm For Future Internet Systems	Shalini Srivastava	117
128	CS-135	Recommendation System For Travel Plan on Big Social Media	Derrie Susan Varghese	118
129	CS-152	Removing Duplicate URLs based on URL Normalization and Query Parameter	Kavita Goel	119
130	CS-158	Analysis and prediction of Adult Income	C. Jayavarthini	120
131	CS-161	An Integrated Technique for Image Forgery Detection Using Block and Keypoint based Feature techniques	Leela Apurupa	121
132	CS-176	Attendance System using Multi-Face Recognition	P. Visalakshi	122
134	CS-195	Improved Query Processing in Web Search Engines Using Grey Wolf Algorithm	Nishant Pal	123
135	CS-22	Smart Recommendation System For Off-The Shelf Medicines	Ratna Sathappan	124
136	CS-58	Green SDN: Trends of Energy Conservation in Software Defined Network	A. Jeyasekar	125



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
137	CS-86	Object Detection Using Support Vector Machine and Convolutional Neural Network - A Survey	Rishi Khosla	126
138	CS-100	Review on the deployment of Encryption Keys	A. Hari Krishna	127
139	CS-114	Survey on Brain Tumor Identification	C. Malathy	127
140	CS-121	Unmasking Fraudulent Ranking of Mobile Applications	T. Namrata	128
141	CS-129	Rural Development Using Location Based Services	Niharika Rastogi	129
142	CS-141	Secured Location Sharing Service by Using Clusters Algorithm for Dynamic Grid System	K.R Jansi	130
143	CS-145	Survey on Detection of Metal Illnesses By Analysing Twitter Data	Aksharaa Sundarrajan	131
144	CS-153	Cloud Storage Safety Against Various Pollution Threats	Aniket Raju Chavan	132
145	CS-169	A Research Study on Hand Gesture Recognition And Application For A Medium of Communication For Deaf And Dumb	Priyanshu Patel	133
146	CS-196	Sign Language Video by Temporally Regularized Canonical Component Analysis	Gopi Srikanth	134
147	CS-197	Semi Supervised Image To Video Adaptation For Action Recognition	Kammula Srinivas	135
148	CS-207	Visual Analysis of Route Choices Based on GPS Trajectories	Abhay Kumar Srivastava	136
149	CS-209	Identification of Diseases in Plant Parts Using Image Processing	S.S. Saranya	137



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
150	CS-210	Crop Field Monitoring And Irrigation Automation	S.S. Saranya	137
151	IT-05	IOT Based Visualization of Weightage Based Static Task Scheduling Algorithm in Datacenter	Preethi M	138
152	CS-43	Congestion Control Framework for SDN Using Backpressure Routing	D.Dinesh Babu	139
153	CS-109	Towards Low Delay Edge Cloud Computing Using Hybrid Approach	SaivineethDomakuntla	140
154	CS-124	Cloud Data Security and Authenticated Service Provision	Saurabh Suresh Dahule	141
155	CS-127	Loan Foreclosure Prediction: Comparing Logistic Regression and Linear State Vector Machine	R. Annie Uthra	142
156	CS-131	Predicting Donor's Likelihood of Donating Given Various Factors	S. Poornima	143
157	CS-137	Evolution of Access Control Models for Protection of Patient Details: A Survey	Geetanjali Sinha	144
158	CS-142	Streaming Analytics	K.N. Abhishika	145
159	CS-143	English Football Prediction using Machine Learning Classifiers	Anand Ganesan	146
160	CS-155	Moving Object Motion Vector Interpolation and Segmentation from High Efficiency Video Coding Bag of Words of Compressed Surveillance Video	Arpit Jonathan Lall	147
161	CS-156	Crime Pattern Recognition and Prediction Using Optimised K-Means and SVM	M.Vijayalakshmi	148
162	CS-167	Path Analysis and Confidentiality of Data Augmentation in Smart City	S.S Saranya	149



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
163	CS-187	Predict Stock Prices Using Neural Networks with Historical Stock Prices: A Review	Vaibhav Sharma	150
164	CS-193	An Extensive Survey of Sarcasm Detection Using Various Classifiers	T. PeerMeeraLabbai	151
165	CS-211	Methods and Approaches on Spam Review Detection for Sentiment Analysis	Sindhu C	152
166	EC-29	Detection of Asthma using MFCC with HMM	Srinivasan D	153
167	CS-54	Survey on Data Integrity for Cloud Security Using AES Algorithm	Aishwarya Pokala	154
168	CS-57	Monitoring of Suspicious Discussions on Online Forums Using Data Mining	Tanya Srivastava	155
169	CS-106	Smart Speedbreaker System Using Internet of Things	Navaneetha Varier	155
170	CS-123	Ceaseless Traffic State Estimation with Connected Vehicles	Karthikeyan	156
171	CS-133	An Expert System on Poker to Increase the Profit of a Hand Using Data Mining Algorithms	Rajesh Khanna	157
172	CS-139	Inter-Relationship between Twitter Data for Restaurant Recommendation System	Abhyudit Bisht	158
173	CS-154	Facial Expression Recognition in Video with Multiple Feature Fusion	M Raghavendra	159
174	CS-165	TRYON	J.V.Vidhya	160
175	CS-172	A Proficient DDOS Overflow Attack Discovery and Avoidance Scheme	K.R. Jansi	161
176	CS-190	Cloud Based De-noising for Privacy from External Cloud Databases	Sagar Chainani	162

SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
177	CS-200	Efficient Youtube Mining and Data Analysis Using Hadoop	R Lavanya	163
178	CS-201	A Review of Classification Algorithms Used for Gesture Recognition using Accelerometer (2018)	Sudiksha Khanduja	164
179	CS-110	Improving Optical Character Recognition Techniques: A Survey	Nitin Ramesh	165
180	CS-163	A Biomedical Communication using Human Body as a Communication Channel	M Hema	166
181	CS-164	Moving Object Detection and Lane Positioning in Advanced Intelligent Transport System	A. Jackulin Mahariba	167
182	CS-184	Performance Analysis of Jitter and Throughput in Software Defined Network	Shankar Chaudhary	168
183	CS-203	A Survey on Automatic Music Generation	Shubham Jain	169
184	CS-213	IOT Based Smart Home with Authorization through Image Processing	Sidharth Veluvolu	169
185	CS-75	Cross-Platform Development: Challenges and Opportunities	Chetan Ruparel	170
186	CS-140	A Survey on Student Performance Prediction	Mudit Panwar	171
187	CS-144	A Survey on Human Intention Classification Using Self-Relevant Sentences on BCI Technology	S.Saravanan	172
188	CS-151	An Augmented Approach of Stream Ciphers in Cryptosystem for an Arbitrary Tradeoffs Attacks	Ranjith Kumar MV	173



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
189	CS-162	Weather Prediction for Indian location using Machine learning	Jitcha Shivang	174
190	CS-182	A Survey of Algorithms Used for The Prevention of Fake Profiles in Social Networks	Manish Dandwani	175
191	CS-183	Data Sharing Strategy in Cloud Computing Using Attribute Based Encryption	Deepanshu Mohan	176
192	CS-189	Prevention of Blackhole Attack using Reactive Propagation Mitigation AOMDV	M. Karthikeyan	177
193	CS-191	Prevention of Insider Attacks Using Hybrid Approach	Sakshi Bhargava	178
194	CS-194	Intrusion Detection to prevent System from Botnet	N.Nishanthi	179
195	CS-205	Home Automation Using Smart Cube	Briskilal.J	180
196	CS-206	A Game-Theoretic Examination of Confrontational Organization	Pradeep Sudhakaran	181
197	CS-214	Multiple Route Choices Based on General GPS Trajectories Analyzed Visually	C.RajeshBabu	182
198	CS-219	Survey of Augmented Reality and Interaction using Gestures	Sreekumar J	183
199	CS-222	A Survey of Several Load Balancing Techniques and Algorithms in Cloud Environment	Sujan Narahari	183
200	CS-220	Router Based Detection for Low-Rate Agents of DDoS Attack and Flood attacks using TCP In Cloud environment	Aditya rangasai Reddy Ravipati	184



**International Conference on Research Development in
Engineering Science & Technology**

(ICRDEST-2018)



SI. NO	PAPER ID	TITLE	AUTHOR NAME	PAGE NO
201	CS-223	IoT Based Smart Field Monitoring System with Disease Identification	Paras Jain	185
202	CS-228	Voice Based Public Opinion Mining and Automatic Category Identification	K Soma Sekhar Varma	185
203	CS-232	Conservation of Cloud Storage Security Using Hybrid Algorithm	Judy Flavia.B	186
204	IT-11	Hybrid Task Scheduling Algorithm For High Availability in Cloud	Snehaa.K	187
205	CS-171	Securing Data on Cloud Using Ciphertext Attribute Based Encryption	Kartik Sinha	188
206	CS-202	Ranking News Based on Social Media and News Channel Sources Using Social Media Factors	Sumit Nihalani	189
207	CS-225	Multinetwork Security and Vulnerabilities for Web Based Platforms	Dev Juneja	190



Support Vector Regression for Residential Load Forecasting in Smart Grid System

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Paper ID: CS-188

Predicting the demand for electrical energy has been a principal business problem for the Utilities, since the inception of the energy generating industry. Over the last ten decades, tremendous amount of efforts have been put forth in this area, focused primarily on aggregate level load forecasting. Due to high variability in residential loads and uncertainty associated with the customer usage patterns, modeling the residential loads becomes a difficult problem when compared to modeling the loads at the aggregate level. The fact that the load forecasting is the core to planning and operations of power systems and other factors like competitive markets, aging infrastructure and integration of renewable energy sources urged revisiting load forecasting with new approaches. Moreover, the introduction of smart meters in the automated meter reading (AMR) segment paved the way for the application of new techniques in Big data analytics through the measurement of fine details of consumption readings from a smart meter of single residential consumer for three months. This paper presents the analysis performed on the consumption readings from a smart meter of a single residential consumer. The issues and challenges in collecting the unstructured or semi-structured data, processing and transforming them to a form suitable for data analytics are explored. The processed data is utilized for load forecasting by building models using machine learning algorithms in Python's scikit machine learning module.



Advance Features and Mobility Management of Mobile WiMAX

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Paper ID: EC-36

Mobile WiMAX comes with an advantage of full mobility support and higher capacity compared to the Fixed WiMAX (802.16d 2004). This leads to a tremendous change in the field of Wireless Communications. There are many handover mechanisms in mobile WiMAX which reduces the handover latency for specifying that, including an advance layer 3 handoff schemes for mobile WiMAX based Wireless mesh Network. Hence in this handover scheme, the handover latency should be very low which reduces the chance of packet losses when compared to the conventional layer 3 handover scheme. The main aim of this paper is to give an overall view about Mobile WiMAX and its applications and also to explain one of the handover schemes for Mobile WiMAX.



Equalization of The Current in a Three-Phase Electrical Power System

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Paper ID: EC-37

Single phase loads connected to three phase systems creates unbalance in the system. This paper aims at the development of certain techniques that could divide the power drawn by a single phase load to the three phases of a three phase system according to the current amount at which each phase is loaded. For accurate controls and power division, we use a DC link connected with converters at both the ends. The power flow is controlled by implementing controlled rectification in each phase. PWM inverters are used to produce perfect sine waves from this DC rectified output, and thus creating a controlled single phase supply from the three phases. The firing pulses for the thyristors are provided by a PIC microcontroller.

Three Phase power converter found applications in every field of life where single phase loads are fed from a three phase supply. Implementing in domestic use can definitely keep the balance of the system even under severe neutral shifts due to failure in system. It increases the balance of the system whenever a new single phase load is operated in the system - just the opposite of what conventional methods do. It can also replace three phase wiring with a single phase wiring, hence cost effective and can drive heavy single phase loads such as X-ray machines, Induction burners etc. by replacing bulky and inefficient systems like phase reduction transformers and improving the balance of the system.

Vitality Efficient Smart Home Automation System

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Paper ID: EC-38

The high vitality required by home apparatuses (like white merchandise, sound/video gadgets and correspondence supplies) and air-con frameworks (warming and cooling), makes our homes one among the chief fundamental zones for the effect of vitality utilization on common environment. Go for the arranging of a framework which will limit vitality squander in home conditions with effectiveness overseeing gadgets operation modes. In our outline we tend to utilize a remote detecting component system to watch physical parameters (like light-weight and temperature) moreover on the grounds that the nearness of clients gathering and in everything about rooms. With a specific end goal to advance vitality utilization and esteem while ensuring the predetermined solace level. At the point when clients change their propensities because of unusual occasions, the framework can see wrong expectations investigating progressively information from sensors and to switch framework conduct thus. Parameters that may stop the presentation of home computerization frameworks for vitality sparing into the mass market.



Improved File Transfer Rate for Similar Data Transmission Using Pattern Matching

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Paper ID: CS-14

Data sharing globally between computers is an essential part of our day to day life. Industries transfer files electronically to various geographical locations very frequently. In practice, file contents are changed minimally between successive transfers. But, files are transferred in its entirety every time, which consumes more bandwidth in case of voluminous files. A novel approach is proposed in this paper to avoid sending the entire file content every time. The proposed method determines patterns found in files and encodes them to reduce the size of files before sending. Encoded patterns are alone sent to the destination. The receiver regenerates the original content by matching the patterns received. File transfer process using this approach reduces the transfer time approximately by 50% compared to traditional methods. The proposed approach reduces the bandwidth requirement tremendously.

An Energy Efficient Hierarchical Routing Protocol For Wireless Sensor Network Using C²R Approach

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Paper ID: CS-15

Wireless Sensor Network (WSN) comprises of 'n' amount of small wireless sensor nodes whose role is to sense the environment and gather the data from the environment. The base station (BS) receives the data collected from the entire network after every round. One of the primary concerns of WSN is to improve energy efficiency and increase the network lifespan. The joining of the sensor nodes into clusters can be done to increase the network lifetime. This is done by selecting the cluster head (CH) for every cluster and then the data aggregation is done at the CH. The proposed system is using an energy efficient hierarchical routing protocol named Clustering and Chain Routing (C²R) Approach for clustering and selecting the most efficient cluster head and chaining the nodes to forward the unit of data to the BS. C²R is the proposed model for clustering large ad-hoc WSN and it uses K-means algorithm. We have divided the entire network into 'k' cluster, which will be 6% of nodes present in the region. The members are allocated to the cluster based on the density of the nodes. This distance is calculated using the Euclidean distance. After allocating the sensor nodes to its respective clusters an ID is assigned to the sensor nodes based on its distance to the centroid of the cluster. Furthermore, the CHs are selected in terms of two factors, the distance from the centroid and residual energy which should be greater than the threshold energy. Once 68% of the nodes alive are blacklisted, the network will no longer re-cluster as it will not have sufficient energy; Instead of the remaining alive nodes transmits its data to the BS directly, The system has used chain formation for the remaining nodes which uses the greedy algorithm. By this, we have increased the energy efficiency, saved the loss of data and also increased the lifetime of the network. Both theoretical analyses and simulation results show that C²R was found to outperform LEACH, HEED and K-Means algorithm.



Short Texts Analysis Based on Semantic Knowledge

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Paper ID: CS-18

Connecting visual data to its linguistic meaning based on semantic knowledge remains a challenge for research. The semantic meaning of images depends on the presence of objects, their attributes and their relations to other objects. But due to this dependency we require complex visual data to be extracted from an image, which is normally a strenuous and yet unsolved issue. In this project, I propose studying semantic information in images created by us. We carefully analyse the dataset to find semantically important characteristics, the relations of words to visual characteristics and methods for calculating semantic resemblance. Finally, we study the relation between the saliency and memorability of objects and their semantic importance. In this project, We have integrated word net for analysing all possible synonyms for the keywords given. Hence search efficiency, accuracy shall be improved. We propose a visual-attribute joint hyper graph learning approach to model the relationship of all images. Our aim of the project is to develop a meaning based search engine and increase the search accuracy and relevancy of search data for both images and web URL's.



Feature Selection for Yield Prediction Using Boruta Algorithm

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Paper ID: CS-20

Feature selection is one of the important tasks in the data analytic research where the datasets have large number of variables. These applications include crop yield prediction, irrigation management, gene expression array analysis, and combinatorial chemistry. The objective of variable selection is three-fold: improving the prediction performance, providing effective predictors, and a better understanding of the underlying process that generated the data. Appropriate features give better prediction accuracy. This research paper focuses on feature selection using Boruta algorithm for the yield prediction. The algorithm is designed as a wrapper around a Random Forest classification algorithm. The selected features are given as the input of Multiple Linear Regression (MLR) for prediction accuracy. Analysis on the MLR model reveals the direct relationship of yield with crop area, number of open wells, and maximum temperature and an inverse relationship with canal length, number of tanks and the nitrogen fertilizer resulting at 84% accuracy.



Applicability of Trip Chaining Method on Smart Cities Deployment

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Paper ID: CS-25

This paper introduces an extensive analysis of passenger segmentation by using Smart card data. Smart card systems maintain large amount of transaction data which can be further utilized for the segmentation purpose. A mining methodology is used which basically pit the tour pattern of the passengers on the basis of the time that a passenger waits for another train, how much time passenger spends in the train, total transfer time etc. This analysis can be useful in synchronizing the number of trains on a most or least crowdie route, travelling pattern of passengers, travel time prediction and travel planning. This paper uses a Bayesian decision tree algorithm for mining the travel pattern of the passengers and a priori market segmentation algorithm for segmentation of smart card holders. The smart cards are similar to that of an ATM, so that they can be recharged and can be reused often. Smart cards are secure portable storage devices used for several applications especially security related ones involving access to the system's database. The smart card has a microprocessor or memory chip embedded in it that, when coupled with a reader, has the processing power to serve many different applications. The smart cards can be used for Public Transport Networks (PTNs). It can also be noted as a service-oriented architecture. Many people are in need of train transportation than any other means of transportation because a number of people may travel at the same time. So people may prefer smart cards for the traveling purpose instead of booking the tickets. The existing fare booking system can be replaced by smart cards.



A Survey on Twitter Data Analysis

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Paper ID: CS-26

Microblogging today has become a very popular communication tool among Internet users. Millions of users share opinions on different aspects of life everyday in popular websites such as Twitter, Tumblr and Facebook. Twitter's popularity as an information source has led to the development of applications and research in various domains. Due to the growth of these microblogging websites, organizations are interested in mine these sites for information to know the opinion of the people about their organization. To help the organizations, in this project, we will collect some of the stats like most influential followers, top 5 tweets, type of engagement, tweet like rate, tweet reach percentage, top 5 sharers, polarity of tweets...etc, based on hashtag or twitter handle provided by the user.

Study on Big Data Analytics Structures for Business Novelty Through Strategic Advertising

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Paper ID: CS-27

Advertising is the key strategy to improvise any business. Being able to find the target audience, advertising has become a new dimension for expanding the business and gaining new customers for increased sales. Targeted marketing using different analytical techniques has become an effective way to optimize advertising resources and support salesmanship. This also requires large amount of data to understand user preferences and, demographics to place best suited advertisement that is relevant to the location that suits the user's taste and needs. Targeted marketing with optimized advertising resources can be achieved using variety of analytical techniques. Our proposed literature survey aims at covering the usability of analytical techniques over the large dataset handled using big data technologies and also to highlight the existing research works on big data analytics framework for advertising. The ideology of implementing the machine learning algorithms in distributed systems and the "know-how's" of how the big data components are integrated to the framework are explored. The proposed procedure could be expanded for multiple domains with machine learning algorithms that deemed fit.



A Survey on Predictive Analysis in Employment Trends

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Paper ID: CS-28

This paper addresses the theories of using predictive analysis and Data Mining in arriving at suitable patterns and predicting paths and trends in the current Employment Scenario more specifically to the Engineering sector. India produces 1.5 million engineers every year, and yet there is a significant gap between their skills and the jobs and corresponding salaries they are offered. Recognizing the factors that influence the salary and the jobs these engineers are offered can help us understand this gap and thereby bridge it. The survey shows that the ideal route to doing so, is by employing various Predictive analysis and Data Mining techniques on appropriate data sets, which help in addressing these issues. As per the survey, appropriate visualization techniques have also been used to extract the meaning from the prediction and analysis.

Survey on Identification and Classification of Waste for Efficient Disposal and Recycling

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Paper ID: CS-29

Waste management is a pervasive problem now a days and is rising continuously with rise in urbanization. For ecologically sustainable development, waste management is a vital requirement in many countries. It is very essential to sort the waste at base level so that there can be proper disposal of waste at the dumping sites. Sorting of waste requires more manpower and consumes more time too. Waste can be sorted and managed in numerous types of techniques. Analysing and classifying the garbage using image processing can be an efficient way to process waste. This papers talks about the traditional methods in which waste disposals are taking place. It also talks about the drawbacks faced by the already existing systems and ways to overcome it.



A Survey On A New Revocable Scheme For Multi-Server Architectures

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Paper ID: CS-30

A revocation mechanism in cryptosystem for a countless number of users is necessary for maintaining the security of whole systems. Revocation scheme is used when some user loses their private keys. The cryptosystem must help a productive renouncement technique to deny such users. It cannot resist the collusion attack that is if the revoked users collude they can derive some secret information which can decrypt any cypher text in any period. We propose another revocable plan with a cloud disavowal expert to provide efficient revocation mechanism. As in prior methodologies, the identity key and time update key will be created by private key generator and cloud revocation authority respectively. For subsequent communication from client to server, re-encryption key will be generated based on time and revocation list. The user will use the re-encryption key sent by cloud revocation authority to encrypt data to server. Since the time is used as part of key generation server can avoid collision attack.



Data Analysis Using Deep Neural Networks

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Paper ID: CS-32

Social media has become very popular especially in this modern age of Internet. It is a large reserve of opinionated data. Nowadays person not only use social media to gain information but also to provide their opinions, reviews about a multitude variety of topics. Data Analysis is defined as the systematic, objective and exhaustive search for the study of the data and facts relevant to any real world problems. It is the process which is used to inspect, clean, transform and model data with the purpose of finding useful information, suggesting conclusions, and supporting decision making. It has various techniques and approaches. Sentiment analysis and opinion mining is one of the approaches that enables us to determine the overall view or opinion that is held or expressed by the people regarding any product, movie or any other topic. Data Analysis also includes analysis of various other aspects of data like the locations in the world where the people have talked about the topic, number of people who have been and are still talking about the topic (which indicates the topic's popularity) and many other. The utility of data analysis is innumerable. It enables the companies to perform research on the market, sales, products, enables to find out the responses of the public regarding particular policies implemented by government. In this paper we have performed a detailed analysis of the tweets relevant to a particular topic of interest using Deep Neural Networks and provide a comprehensive analytical solution about the entity.



Extensive Survey on Congestion Avoidance for Vehicular Traffic System

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Paper ID: CS-34

Mobility is one of the basic requirements in modern environment. People use variant transportation facilities such as subways, bicycles and so on to reach their destination. Automotive vehicles are widely used by the people due to its comfortability. As the population increases, the number of vehicles usage also increases. This scenario urges to develop a faster transportation infrastructure that initiates the congestion issue. Congestion is a never-ending issue of the vehicular transportation system. This paper surveys on various congestion avoidance mechanisms and routing strategies suggested by the researchers. Since, congestion is the main area of the study; we discuss the causes and parameters considered for designing efficient congestion avoidance model. The survey illustrates the challenges like network support, packet loss avoidance, packet size, multi-domain congestion control, misconduct source and receiver and the connectivity. These issues act as barrier for designing efficient congestion avoidance mechanism in Distributed Traffic Management Systems. Several routing protocols has also been designed to avoid this congestion issue, which we will discuss in the below sections.



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(ICRDEST-2018)



Re-Thinking River Diversion Projects - A Political Ecology Perspective

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The usage of pipelines to make water available to people has been widely discussed phenomenon throughout the world. Less argued are the projects which divert tributaries from larger rivers via small diversion channels for the sake of short-term goals that work around natural waterscape. River Khan is one such smaller stream which accumulates the entire waste of Indore city and has been diverted from its larger stream River Kshipra in the wake of Kumbh Mela 2016, to keep the larger stream clean. In this context, the paper investigates the discrepancies of this project and identifies the political and economic forces involved in the formation of such projects during events like Kumbh Mela. Using the theory of political ecology, the paper attempts to understand the complexities surrounding environment and development. Through government policies and influence of material conditions on culture, the paper also explores the unfair relations amid societies that influence the natural environment.



**Changing Mechanisms of Enterprise Security
(Comparing Beyond Corp with Prevalent
Network Security Mechanisms)**

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Paper ID: CS-36

War driving, camp out etc. are common methodologies of gaining access of a company's network and resources illegally. Packet capturing, out of thin air, brute force etc. are common mechanisms to gain key or password access to any company's applications. In the times where hacking and cyber-attacks have become prevalent, companies are deploying various network security mechanisms to counter these attacks and to safe guard company's applications and data. Beyond Corp is a new technology that is being used by Google these days to safe guard its applications. In this paper we will compare some of the network security mechanisms that many companies use to avoid cyber-attacks with Beyond Corp technology which is being used by Google to avoid security breach in the company's network and applications.



Offline Smart phone Based Human-Fall Detection System

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Paper ID: CS-38

Everyday we are seeing a lot of accidents happening around the world. An effective way for reducing these traffic fatalities is to first develop automatic traffic accident detection system and second is reducing the time when first emergency responders reach that place. Nowadays we can detect traffic accidents using smart-phones and that ability has only recently become possible because of the technological advancements such as different sensors deployed in our smart-phones and their processing power. In our proposed work we use smart-phones for accident detection. The whole system relies on the G-Force value (extracted from smart-phone accelerometer sensor) to detect an accident in the offline mode. To elucidate the fall detection technique, we use the waveform sequence of the tri-axial accelerometer (X, Y, Z Axis) on the smart-phone as the system inputs. The acquired signals are then compared with our threshold G-Force value so that it can be used to fetch the GPS location of the smart phone thereby track the victim. The GPS location will be continuously fetched using Google API's. Once the threshold limit is reached then the SMS and the current latitude and longitude coordinates will be sent in the form of string to our pre-registered emergency contacts. It is thereby used as a faster emergency rescuer by sending precise location.



Survey on Grey Wolf Algorithm In Resource Allocation

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Paper ID: CS-39

Nature Inspired Algorithm (NIA) have been gaining much popularity in the ever changing dynamic world, comprising of several application in optimization problems. Grey Wolf algorithm (GWO), one amongst several well known NIA mainly highlights the hunting and searching procedures that are deployed by grey wolves in nature. Alpha, beta, delta and omega are four types of grey wolves that are used to replicate the leadership attribute among grey wolves. Over and above the three main modules of poaching, finding the prey, trapping it, and attacking are implemented. The survey concentrates on the features that are considered in resource allocation such as energy consumption, power consumption, path finding, optimization problems that deals with finding optimum paths for conservation of various entities in several fields and exhibits the properties inherited from grey wolves such as searching, encircling, and attacking which shows that the algorithm implemented has a very new and efficient solution to various problems offered in real life. All these factors have been conserved in various GWO applications such as energy conservation, power conservation and focuses on utilities such as encircling and poaching which act as essential part in the algorithm.



Video Recommendations: Suggesting New Approaches

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Paper ID: CS-40

Video Based Learning has become a very important way to learn various things for all age groups ranging from children to adults. Thus in this era of video based learning, recommendations play a very vital role by recommending videos to the user that are popular, or are of their particular interests. Though many video content providers use different techniques for recommendations, we present our way of implementing a recommendation system which can be incorporated into a fully functioning website on their backend. We present the current recommendation trends that we observed from the various other papers and present a possible improvement over them.

Business Driven Automation Testing Framework

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Paper ID: CS-42

Due to versatile growth of software industry, we need to invent and adapt new technologies to reduce the production cost and to increase the quality. Now a days the industry is moving towards the 100% of automation testing and is being done by the different kind of users. The same test script will be executed by the domain expert instead of a technical expert, so we can't expect him to understand the complexity of scripts and to relate the test script with business scenarios. To simply the users view of automation testing we need a layer to hide the technical implementation and to introduce some simplified way to understand the test script and relate with business scenarios, if needed he should be able to modify the test scripts without having the technical knowledge. The gap between the customers' expectations and the actual product behavior will be reduced using this proposed approach.

Anomaly Based Host Intrusion Detection System Using Analysis of System Calls

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Paper ID: CS-46

Security is always a major concern of any organization. An intrusion detection system (IDS) is necessary to detect the malicious activities over a network or single system. An ID is the most useful approach to safe guard single system and the computer networks from various malicious activities. There are two categories of intrusion detection system is available host based intrusion detection system (HIDS) and network based intrusion detection system (NIDS). NIDS is mainly used to detect the malicious activates in the network. HIDS is used for detecting attacks in the single system. For an intruder, it is difficult to compromise a system being protected with Host Based Intrusion Detection System. HIDS continuously monitors the system audit and event logs to safe guard the execution of programs. Design a host based intrusion detection system with less false alarm rate is major challenge. The proposed scheme of anomaly based host intrusion detection method is to detect the malicious activities based on the analysis of system calls with less false alarm rate. An increase in detection rate in the existing anomaly host-based intrusion detection systems results in increased in false alarm rate. This leads to the development of a new method of host-based intrusion detection system with high detection rate and less false alarm rate. The gathered system calls sequences are analysed to determine the activities are normal or malicious. It is very difficult to identify the malicious activity by analyzing huge log file. Here system is designed, which uses Harmony search based K-Means clustering approach for detecting the intrusion in system calls.



Review on Foreground Artificial Intelligence In Games

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Paper ID: CS-47

Artificial Intelligence (AI) is applied in almost every field existing in today's world and video games prove to be an excellent ground due to its responsive and intelligent behaviour. The games can be put to use model human- level AI, machine learning and scripting behaviour. This work deals with AI used in games to create more complicated and human like behaviour in the non player characters. Unlike most commercial games, games involving AI don't use the AI in the background rather it is used in the foreground to enhance player experience. An analysis of use of the AI in a number of existing games is made to identify patterns for AI in games which include decision trees, scripted behaviour and learning agents.



Efficient Mining and Recommendation of Extensive Data Through Collaborative Filtering in E-commerce: A Survey

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Paper ID: CS-49

E-Commerce is the most widely used technique nowadays. Buying and selling goods on the Internet has been most admired and frequently utilized. The humongous growth of the content available on the internet has made laborious for users to search and utilize information for classifying the products. Recommendation system regarded as the best way to help the customers in buying the related products. (GRS) group recommender system aims at enhancing the customer's benefits for buying the products. This paper summarizes the fuzzy tree matching, modeling user preference dynamics, web page recommendation, uncertainty analysis for keywords, recommender system application, temporal topic model for friend recommendation, autocratic decision-making system based on (GRS), modeling user recommender, evaluating recommender system and enhancing (GRS).



A Survey Paper on Suicide Analysis

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Paper ID: CS-51

Suicide is one of the major causes of death across the world. With data being generated in humongous quantity every second through various media like social networking sites, surveys, etc.; a lot of relevant information is available for suicide analysis. Data from social networking sites especially twitter has been extensively considered for research to automate the process of suicide prediction by using various machine learning and text mining techniques. Apart from the social media analysis, socio-economic and cultural factors have been studied to find reasons that drive people towards suicides. A lot of research has focused on studying social media posts and surveys but research on real-time data is at inchoate stage. This paper aims at elucidating various factors responsible for suicide ideation, techniques and algorithms used to automate suicide prediction and also notice the issues and challenges faced by the existing research to expatiate requirements of future research.



Facial Expression Recognition Using Convolutional Neural Networks

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Paper ID: CS-52

In this paper we describe the application of facial emotion recognition. This paper delineates various stages involved in the facial emotion or expression recognition. The stages can be modularized into three stages viz. pre-processing module, training module and the testing module. These three stages have been studied in various papers and a comparative analysis has been performed. Various factors leading to degradation and improvement in the performance of the model have been considered. A successful model leads to automated emotion recognition with high accuracy and confidence. Such a model can further can applied to various other applications - an example is suggestive applications - where considering the emotions or mood of a person will tend to give better applicability.

Study of Application of Software Defined Network To Real Networks

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Paper ID: CS-53

This paper presents the application of Software Defined Networks in Real Networks. Software Defined Networking is an intriguing concept in the networking and communication industry which provides various uses, from productive network operations to reduced costs in the network. The SDN architecture provides the network administrators to implement new network services and easy management of the network. This operation is done by separating the management plane and control plane that makes decision. The data plane forwards packet and control plane manages traffic. In this paper we are studying the application of SDN to Real Networks such as SDN for Internet of Things, Artificial Intelligence, 5Generation Networks, Wireless Networks.



Secure and Efficient Query Processing Using Randomized Encryption and De-duplication on the Cloud

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Paper ID: CS-56

Cloud computing [1] is the most upcoming area of the IT industry that helps the users to get rid of the hardware resources and complexity in storage and computational power. All the people started using cloud which led to many security concerns relating to the data confidentiality and integrity. This became a challenge to the widespread of the new cloud computing technology. Many measures are taken to improve the cloud security and then there came the concept of cryptography to upgrade the cloud security. Today, the main problem is to sustain data privacy [2] against unreliable cloud service providers and to provide correct query results to the authenticated users. Existing approach provide confidentiality using only one symmetric encryption algorithm which generates only one secret key to both encrypt and decrypt. But this is not so secured as the attacker can easily guess the algorithm and thereby find the key. In this journal, we proposed a randomized encryption technique in which the files are randomly encrypted by three strong algorithms AES, Triple DES and Blowfish [3] which improves the security and we are also implementing new techniques to improve security like key generation via OTP method, etc. In addition to this, we are also going to solve the storage issue of redundant or duplicate files consuming the cloud storage by using a file-level de-duplication technique which can eliminate the duplication of files uploaded into the cloud, thereby saving storage and reduce the need to buy extra storage.



Predicting Close Stock Prices

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Paper ID: CS-61

Forecasting the prices of Stocks in the inconsistent Market has always been an important yet challenging task. This is because of the various variables affecting the market and the constant fluctuation of the prices in general. Data Mining is one of the few areas in Computer Science that is used to pull out interesting information from huge data sets. The idea behind this project is to make use of Machine Learning Algorithm specifically to predict equity price for a week period. Equities are stocks – shares of companies like Google, TCS, ITC LTD & HDFC Bank Ltd. The project if restricting its scope in trading can help the investors in the stock market to decide the better timing for buying or selling stocks based on the predictive knowledge extracted from the historical data of such stocks. It is interesting because there is no long term/ fixed strategy to predict in equity trading.



Detection of Microaneurysms and Hemorrhages in Fundus Image for Glaucoma Diagnosis

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Paper ID: CS-63

Eye is the most sensitive and valuable organ of vision which helps us to visualize the world around us. Due to the high pressure in the eye, the optic nerve fails to transmit the signal to the brain; such a disorder is called Glaucoma. Detection of Microaneurysms and Hemorrhages are validated from the fundus image. To extract the shape features Morphological image flooding is used. In this approach, candidate regions are first segmented, Feature Extraction is done by Dynamic Shape Features. Further the classification process is carried out using Random Forest (RF) classifier method. The process of screening is evaluated on publicly available database Diaretddb1 with the resolution of (1152 x 1500pixels) for both healthy and abnormal images. The performance of segmentation in this method is analyzed in terms of specificity, sensitivity and segmentation accuracy. In future, this algorithm can be extended to larger clinical databases in order to identify the disease at the utmost level.



Optical Compute Engine Using Deep CNN

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Paper ID: CS-64

We present an optical compute engine with implementation of Deep CNNs. CNNs are designed in an organized and hierarchical manner and their convolutional layers, subsampling layers alternate with each other, thus the intricacy of the data per layer escalates as we traverse in the layered structure, which gives us more efficient results when dealing with complex data sets and computations. CNNs are realised in a distinctive way and vary from other neural networks in how their convolutional and subsampling layers are organised. DCNNs bring us very proficient results when it comes to image classification tasks. Recently, we have understood that generalization is more important when compared to the neural network's depth for more optimised image classification. Our feature extractors are learned in an unsupervised way, hence the results get more precise after every back propagation and error correction.



Pre-Authentication Approach Towards Proxy Re-encryption in Cloud Data Context

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Paper ID: CS-65

This survey paper categorizes, compares, and summarizes the algorithms, data sets and performance measurement in the published articles related to proxy re-encryption and medical systems. Most of the systems either deploy a pre-authentication approach or a proxy re-encryption approach, they are seldom seen together. Most of the systems either take a patient -centric or a doctor-centric approach whereas the demand is for a common system that can be accessible to all access groups. Multi-data sharing is another concept that is necessary to be implemented in the newer systems and is lacking in many of them. The proposed system overcomes all these problems. It uses RSA for the pre authentication and AES algorithm to perform pre authentication.

Heart Disease Prediction Using Machine Learning Techniques: A Survey

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Paper ID: CS-66

Heart related diseases or Cardiovascular Diseases (CVDs) are the main reason for a huge number of death in the world over the last few decades and has emerged as the most life-threatening disease, not only in India but in the whole world. So, there is a need of reliable, accurate and feasible system to diagnose such diseases in time for proper treatment. Machine Learning algorithms and techniques have been applied to various medical datasets to automate the analysis of large and complex data. Many researchers, in recent times, have been using several machine learning techniques to help the health care industry and the professionals in the diagnosis of heart related diseases. This paper presents a survey of various models based on such algorithms and techniques and analyze their performance. Models based on supervised learning algorithms such as Support Vector Machines (SVM), K-Nearest Neighbour (KNN), NaïveBayes, Decision Trees (DT), Random Forest (RF) and ensemble models are found very popular among the researchers.



Secure Data Retrieval In Cloud Using Multiple Keys: A Survey

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Paper ID: CS-67

This paper presents a survey on various data retrieval techniques in cloud using multiple keys. Usually, data owner uploads the data after encryption to ensure data privacy and security. Query users, generally retrieve encrypted data from cloud and decrypt for further use. Thus, retrieving the files securely has become an important factor. Existing techniques considers all the query users are trusted, but this is not the case that can be considered in all situations. In this paper, we provide the detailed review about the data retrieval process, functionalities, methodologies and the evaluation of various data retrieval techniques using multiple keys in cloud.

An Efficient Automated Road Region Extraction from High Resolution Satellite Images using Improved Cuckoo Search with Multi-Level Thresholding Schema

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Paper ID: CS-68

In this paper, we present an improved cuckoo search optimization algorithm for extracting road regions from high resolution images using multi-level thresholding schema. Automatic road region extraction from high resolution satellite images automatically neglects sharpening the image segments since the available information is with high pixel values. However, occlusion and overlapping of objects are yet another a challenging task in segmenting the roads from available images. And also identifying the number of threshold values which defines all type of roads (main roads and roads alongside main roads, etc.) increases the complexity of the problem to define exact road region. In this proposed method, multi-level thresholding concept is applied for efficient road region extraction (Otsu). After finding the number of available threshold values to be segmented, an improved cuckoo search optimization algorithm is incorporated for finding the optimal threshold value for extracting the road regions from the given image. The conventional multiclass SVM classifier is used for efficient extraction of road regions from the given images. This proposed methodology will be tested with three developed sub-urban region satellite images and the results are compared with existing segmentation algorithms.

A Comprehensive Survey of Research Based on Extraction of Opinion Words and Opinion Targets From Customer Reviews

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Paper ID: CS-69

This survey paper categorizes, compares, and summarizes the algorithms, data sets and performance measurement in the published articles related to extraction of opinion targets and words from customer reviews. The systems reviewed either deploy a supervised or completely unsupervised algorithm for the process. Most of the systems rely on K-nearest neighbor algorithm or a bootstrapping approach. Most of the methods have produced lists comprising of opinion targets from the customer reviews of a product. As a result, opinion targets usually are product features or attributes. The approaches mentioned in the papers reviewed suffer either from error propagation or from lack of automation for parsing long span relations. Certain approaches have taken an initial bag of seed words and proceeded to exploit the syntactical relationship between opinion words and targets. Mainly online product reviews have been used. It is generally believed that the co-occurrence of certain target and opinion words in close proximity makes them more relevant to each other and to the product as well. Owing to the nature of online review data sets most literature have not included assessment of opinion targets and words across multiple domains.



Enhancing the Quality-of-Service in Multipath Wireless Networks

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Paper ID: CS-70

A mobile ad hoc network (MANET) is defined as a set of mobile hosts that operate in absence of the administration of any infrastructures such as base stations or access points. Due to the lack of base stations, all the mobile hosts act as a router in order to forward other hosts' packets. The ability of the hosts to be connected to multiple radio nodes simultaneously allows mobile phones to transfer to and fro data from multiple paths. This capability improves the average throughput of mobile devices and also the reliability of the network.[1] To avoid network congestion among the mobile hosts we implement the load balancing. In order to avoid the increase in delay or packet reordering we implement effective techniques to split the traffic accurately.

In our paper, we cover two major drawbacks of Mobile wireless uplink networks: 1) Splitting the traffic accurately among the multiple paths and 2) Minimizing the end to end delay avoiding the packet reordering. We implement a Uniform Load Balancing Algorithm (ULBA), a new strategy that distributes the traffic to the granularity of the packet. This algorithm utilizes all available paths and minimizes the end-to-end delay and also the splitting error. We evaluate the outcomes of ULBA through comprehensive simulations with data packets traffic. The outcomes shows that ULBA outperforms existing algorithms in the aspects of splitting error, peak signal-to-noise ratio and end-to-end delay while maintaining the reordering of the packets at a suitable low value.



Genetically Modified Organisms: Present and Future Implications on Environment, Health and Economy

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Paper ID: CS-71

The improvement and prudent utilisation of crop biotechnology offer important contributions to food security and sustainability. The arrival of GMOs into the environment and the promoting of GM foods have brought about a public debate and discussion in many parts of the world. This open deliberation is probably going to proceed, most likely in the more broader context. While theoretical discussions have covered a broad range of aspects, some main aspects which need to be debated are weed resistance, pesticides, soil, water, environment, gene flow, biofuels, effects on non-target species, effects on human health, phytoremediation, economic impacts and Government regulations. We in this paper try to get to the bottom of this and explore the facts, fears and the future of GMOs.



Survey on Short-Term Load Forecasting Using Hybrid Neural Network Techniques

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Paper ID: CS-73

Load forecasting is an issue of great importance for the reliable operation of the electric power system grids. Various forecasting methodologies have been proposed in the international research bibliography, following different models and mathematical approaches. In the current work, several latest methodologies based on artificial neural networks along with other techniques have been discussed, in order to obtain short-term load forecasting. In this paper, approaches taken by different researchers considering different parameters in means of predicting the load error has been shown. The paper investigates the application of artificial neural networks (ANN) with fuzzy logic (FL), Genetic Algorithm (GA), Particle Swarm Optimization (PSO) and Support Vector Machines (SVM) as forecasting tools for predicting the load demand in short term category. The extracted outcomes indicate the effectiveness of the proposed method, reducing the relative error between real and theoretical data.



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Digit Recognition using Deep Learning

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Paper ID: CS-74

Deep learning is powerful technique in current generation. This Paper presents the results of handwritten digit recognition on well-known image database using Convolution neural network. Deep learning increases accuracy and reduces computation time as was caused by simple artificial neural network. High accuracy facilitates model to predict any extent of distorted data. Additionally a comparative analysis is performed and computation time is recorded to train a model on multicore CPU and General GPU.



A Survey on the Recent Developments in the Area of Drought-Forecasting

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Paper ID: CS-77

Over the years, natural calamities like drought have taken a huge toll on human life and resources. With the advent of newer methods of prediction, the adverse effects of such natural calamities can be reduced to an extent by pre-planning and providing sufficient warnings to the people. Many of the previous prediction methods majorly used statistical methods such as ARIMA, but these methods were still lacking the accuracy to provide long-term forecasts, but with advances in the area of Machine Learning especially Artificial Neural Networks and the more bleeding edge versions of it like Deep Neural Networks, there seems to be a method to predict drought in the long term with a good accuracy which can help authorities better prepare and mitigate the losses to a huge extent. This paper compares and contrasts the various methods used in different studies over the years and their results.

A Review on Road Extraction using Remote Sensing Data

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Paper ID: CS-79

Road extraction stands as a quintessential node for the development of rudimentary layers in innumerable fields. From GIS to Unmanned Aerial vehicles, road maps pave the foundation for data accumulation. This significant process is a result of a number of mechanisms devised over the years through iterative experiments and research. However, the glut of methods available often poses a hurdle in the selection process. In this paper, we trace the creation of remote sensing data in detail, highlight their features, elaborate on classification methods for extraction, and provide a statistical analysis of the various road extraction techniques. And finally, we offer a user-friendly approach for commercializing road extraction using Artificial Neural Network (ANN) and Back propagation algorithm.

A Greedy File Merging Algorithm for Handling Small Files in HDFS

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Paper ID: CS-80

Data-intensive applications on Hadoop require support for efficient read/write and memory utilization for massive number of small files. In this paper we present a greedy algorithm for merging small files and appending them to large files. The goal is to reduce the NameNode memory usage. The algorithm is implemented and the performance is measured for various distributions of small files in the data sets. The results of the algorithm implementation indicate that the proposed algorithm is effective in optimizing the NameNode memory usage.



A Survey Of Road Traffic Prediction with Deep Learning

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Paper ID: CS-81

Road traffic prediction is a problem that can be approached in a variety of ways using various methods. Real-time road traffic prediction is an important feature in Intelligent Traffic Systems (ITS). The forecasts created by these systems have a major impact on the regulation of the road traffic on all types of freeways. Current systems of road traffic prediction do not make full use of the available resources. This project aims to demonstrate the potential benefits of incorporating the concepts of deep learning in order to predict traffic flow in the short term. The available data on traffic flow can be used to train a deep neural network to recognize patterns and give a short-term forecast for traffic flow for a particular area. This, in addition to the existing GPS-based system which gives data about real-time traffic, can potentially be used to significantly improve the accuracy and efficiency of short term traffic prediction.

A Survey on Tradeoff Between Storage and Repair Traffic in Distributed Storage Systems

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Paper ID: CS-82

Distributed storage systems give dependable access to information through excess spread over independently unreliable hubs. Application scenarios incorporate server farms, distributed capacity frameworks, and capacity in remote systems. This paper gives a study on the cloud storage model of networked online storage where data is stored in virtualized pools of storage which are generally hosted by third parties. Hosting companies operate large data centers and people who require their data to be encouraged buy or lease accumulating limit from them. The server cultivate overseers, outside of anyone's ability to see, virtualize the advantages according to the necessities of the customer and reveal them as limit pools, which the customers would themselves have the capacity to use to store records or data objects. . The data is stored across various locations, when the user wants to retrieve them, it could be done by any of the encryption methods. At last, in view of existing procedures, promising future research bearings are recommended.



Pseudo Random Number Generators

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Paper ID: CS-85

Pseudo Random Numbers (PRNs) are a kind of random numbers that are generated using a seed value. PRNs are generated by Pseudo Random Number Generators (PRNGs) which are also known as Deterministic Random Number Generators. There have been various pseudo random number generators proposed from time to time. These PRNGs aim to generate pseudo random numbers that are uniformly distributed, completely random and have a large periodicity. There are many state of the art algorithms that aim to generate such random numbers which further find application in session key generation, simulation and games and other applications requiring long bit sequences. This paper aims to bring together such PRNG algorithms, their statistical results and related applications and also aims to provide a general conclusion as to which of these is the most efficient and best technique.



Practical Insights into Developing Applications with Micro service Architecture: A Survey

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Paper ID: CS-87

As the scale and complexity of software increases, it is increasingly difficult to write maintainable, scalable and robust software. Monolithic software tend to have greater coupling and thus as they grow, they become inflexible with regard to updates and deployment options. The micro services architecture is a maturing field which tackles many of these problems at the cost of the increased complexity that any distributed system entails. The development process is also significantly different for micro services. In this paper we review and synthesize the latest formal and informal research in micro services and organise the practical insights gleaned into the concerns that a practitioner faces when developing applications with micro service architecture for easy application of the state of the art.



Credit card Fraud Detection Using Machine Learning models and Collating Machine Learning models

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Paper ID: CS-88

Finance fraud is a growing problem with far consequences in the financial industry and while many techniques have been discovered. Data mining has been successfully applied to finance databases to automate analysis of huge volumes of complex data. Data mining has also played a salient role in the detection of credit card fraud in online transactions. fraud detection in credit card is a data mining problem, It becomes challenging due to two major reasons – first, the profiles of normal and fraudulent behaviors change frequently and secondly due to reason that credit card fraud data sets are highly skewed. This paper investigates and checks the performance of Decision tree, Random Forest, SVM and logistic regression on highly skewed credit card fraud data. Dataset of credit card transactions is sourced from European cardholders containing 284,786 transactions. These techniques are applied on the raw and preprocessed data. The performance of the techniques is evaluated based on accuracy, sensitivity, specificity, precision. The results indicate about the optimal accuracy for logistic regression, decision tree, Random Forest and SVM classifiers are 99.1%, 98.9% and 99.4%, 98.1% respectively.



A Brain Computer Interface For Automation control

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Paper ID: CS-89

Brain-computer interface (BCI) system is a new communication channel that has been developed to enable a direct interaction between the human brain and a digital computer. The main motive of BCI is to aid the physically disabled people with the restoration of movements, communication and controlling their surrounding environment. Due to various patterns of neural interactions there arise different brain states. These patterns lead to waves characterized by different amplitudes and frequencies. The neural interaction takes place between multiple neurons. The patterns of interaction between these neurons are represented as thoughts and feelings. Now in accordance with the human thoughts the pattern will be changing and thereby it produces different electrical waves. This project deals with the unique electrical signals produced as a result of different brain states are these signals will be sensed by the brain wave sensor. It will convert the data received into packets then transmit them through Bluetooth medium. The level analyser unit will receive the brain wave raw data and it will extract and process the signal using MATLAB platform. The next step includes sending the instructions to the concerned section in order to operate the modules like bulb, fan and many other electrical appliances. This project is entirely based on the idea that blinking along with concentration power can be used to automate any electrical appliance.

Ergonomic System to Assess Knee Joint Health

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Paper ID: CS-90

Knee replacement is an operation frequently needed by hemophiliacs patients, which greatly improves their quality of life. This operation, however, carries a higher risk of bleeding and infection for hemophiliacs than it does for osteoarthritis sufferers. It is advisable to implant prosthetic components using antibiotic-loaded cement. Haematological treatment must be established, depending on the patient's factor levels and other pharmacokinetic parameters such as recovery and half-life, optimal doses and treatment time. The biomechanics of the knee joint provide an important basis for the rationale in the design and selection of appropriate total knee arthroplasty. This article examines knee biomechanics in terms of patient function, prosthesis design, cruciate ligament retention, alignment, and fixation of the tibial component. A replacement knee can never be quite as good as a natural knee – most people rate the artificial joint about three quarters normal. Most knee replacements aren't designed to bend as far as your natural knee. In the proposed system flex sensor is used for monitoring the bending position of the leg by position identification algorithm. If the sensor finds the bending position continuously the buzzer will be in ON. By monitoring strain (Force sensor) one can determine local tissue deformations and stresses in bone and cartilage. Strain sensors in implants have been used to measure net joint loads. The sensor value will be monitored continuously and updated in web page. Patient can know their regular force and flexible updation of the leg. Total knee replacement can increase mobility and decrease pain in people who have an injured or arthritic knee joint



Huffman Coding Packet Balancer Based Data Compression Techniques in Wireless Sensor Network

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Paper ID: CS-91

In Wireless Sensor Networks, sensor devices perform sensing and communicating task over a network for data delivery from source to destination. Due to the heavy loaded information, during packet transmission, sensor node will drain off its energy frequently, thus led to packet loss. The novelty of the proposed work mainly reduces the loss of packet and energy consumption during transmission. Thus, Huffman coding packet balancer a) select the best path between the intermediate node are compared based on transmitting power, receiving and sensing power these measure the QOS in wireless sensor network. To satisfy the QOS of the node, compressed packet from source to destination is done by choosing the best intermediate node path. The advantages of the proposed work is minimum packet loss, minimize the end to end delay. Sparse recovery is used to reconstruct the path selection when there is high density of node.

Airport Trends Analytics Engine Using the ARIMA Model

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Paper ID: CS-92

Data Analytics is the process of analyzing unprocessed data to draw conclusions by studying and inspecting various patterns in the data. Several algorithms and conceptual methods are often followed to derive legit and accurate results. Efficient data handling is important for interactive visualization of data sets. Considering recent researches and analytical theories on column-oriented Database Management System, we are developing a new data engine using R and Tableau to predict airport trends. The engine uses Univariate datasets (Example, Perth Airport Passenger Movement Dataset, and Newark Airport Cargo Stats Dataset) to analyze and predict accurate trends. Data analyzing and prediction is done with the implementation of Time Series Analysis and respective ARIMA Models for respective modules. Development of modules is done using R Studio whereas Tableau is used for interactive visualization and end-user report generation. The Airport Trends Analytics Engine is an integral part of R and Tableau 10.4 and is optimized for use on desktop and server environments.



Sentiment Analysis on Twitter: A Survey

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Paper ID: CS-96

In the world of Information Explosion and Big Data, Data Analytics takes a critical role in determining the business decisions of many organizations. On performing analysis on clean and unclean data, we can take important decisions in critical planning and decision making that will change the future of that concern. Opinion mining, Data Mining, Web Mining and Sentiment Analysis takes an important role, albeit in background in decisions taken in everyday life. However, Sentiment Analysis deals with the polarity of the given context. It is slightly more complicated than Web Mining or Data Mining because of its inherent nature to be complicated. Real-time scenarios of Sentiment analysis include Product Reviews, Irony and Sarcasm detection, Auto-Correct feature, and so on and so forth. The fundamental Sentiment analysis algorithms that perform feature extraction include Naive-Bayes algorithm, Support Vector Machines and Natural Language Processing. Still the accuracy and efficiency of such methods is questionable when it comes to analyzing the document in depth. These methods can label either positive or negative, find the overall polarity and so on and so forth. The advancements in Sentiment Analysis algorithms do not fully solve these problems. Hence, we have written this Survey paper which elucidates in detail the existing methods for Sentiment analysis and at the end, a comparison between various implemented papers' methods is made along with certain metrics and issues present in them.

A Survey Face Spoofing Detection Using Various Classifier

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Paper ID: CS-101

Face spoofing is major problems raised when the security is based on the face recognition. A Spoofing attacks occur when someone attempts to bypass a facial recognition system by showing a fake facial image facing the camera. This kind of intrusion cases are increasing nowadays. So different techniques are being developed to prevent such kind of spoofing attacks. Research is currently underway on software-based facial identity theft detection systems, which focus primarily on analyzing the luminance information of facial images, therefore removing the chroma component that is used for differentiating fake faces from the original faces. In this journal we present a better technique to identify face spoofing via colour texture analysis. This make use of most the common colouration-texture statistics from the mild and the chrominance medium via extracting complementary low-stage function descriptions from exclusive colour spaces. A new technique using color texture analysis and multi-scale spatial rendering is suggested to show that the chrominance component can be used for distinguishing faux faces from true ones. First, the image is captured, chopped and normalized to an $X \times Y$ pixel image. Subsequently, embedded texture descriptions area unit extracted from every color channel and also the ensuing feature vectors are a unit concatenated into associate degree improved feature vector to obtain a worldwide illustration of the feel of the face color. The final output is given to a KNN and also the output score price describes whether or not it's a true or a pretend image

Application of XGBoost for the Prediction of Cyclonic Severity in Bay of Bengal

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Paper ID: CS-138

The severity of the cyclone depends on the amount of the pressure drop in the centre and the rate at which it increases outwards. The importance for the prediction of cyclone intensity [7] is growing day by day. In this paper we are addressing about the four type of severity of cyclone – Depression (D), Deep Depression (DD), Cyclonic Storm (CS), Super Cyclonic Storm (SCS). The objective of the work is predicting the cyclone severity using the wind speed, latitude, longitude of the pressure. When the severity is predicted well in advance then it will be very useful for the disaster management for proper planning. In this paper we are applying Xgboost model of linear regression for prediction. Xgboost is a gradient boosting algorithm which is based on decision tree. The model is trained with the dataset of 10 years (1990 – 2000) containing latitude, longitude and pressure drop of the cyclones occurred in Bay of Bengal (BOB) along with the date and time.

A Novel Approach for Visual Speech Recognition using Convolution Neural Network: An Aid to Speech-impaired people

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Paper ID: EC-01

There are lots of assistive technologies available to assist the speech-impaired people. But they lacked their real time abilities and failed to reduce the complex nature in communication. In this project, a new approach is proposed to identify the word from a visual speech input disregarding acoustic signals. The speaker's lip and tongue movement are tracked visually to generate series of input pattern. Convolution neural network (CNN), a deep learning technique is used as classifier considering the depth of classification which is better than the traditional methods like Support Vector Machines (SVM) and Principle Component Analyzer (PCA). Separate database with pre-trained and predefined syllable unit is created. Whenever a word is uttered, images are captured and detected, and then further classified using modified Alexnet, a CNN classifier.

Performance Analysis of Different Designs of D Flip Flop

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Paper ID: EC-03

All optical flip flops play an important role in optical networks as well as in the field of optical computing. Optical memories are used for storing decisions in photonic packet routers temporarily. In this paper all optical D-flip flop is designed based on all optical gates. The non linear effects such as XGM (Cross Gain Modulation), XPM (Cross Phase Modulation) and FWM (Four Wave Mixing) are used to design all optical gates. We designed the D flip flop based on two logic that are NAND-NAND logic and NAND-NOR logic. The performance of both the designs is analyzed and the functionality of all optical D-flip-flop is verified using the truth table. It is proved that NAND-NAND logic is more effective than NAND-NOR logic.

Connected Lighting System with ZigBee Control Board and PWM

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Paper ID: EC-05

In order to achieve high energy savings, there are various smart lighting control methods comprising network solutions and smart controllers. This paper aims to support a network-based lighting control solution using Zigbee protocol that incorporates communication between various system components for lighting control. It creates an emphasis on development of a wireless system where a network is created and connected to LED luminaire through PWM driver which uses the average current controlling design which redirects to the control of brightness and intensity of luminaire forming an interoperability with all the required network devices.



An Assistive Bag For Blind and Deaf

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Paper ID: EC-06

People with disabilities who use visual aids like hearing aid, blind stick for obstacle detection while walking etc. are often discriminated in the society as they are handicapped. The main focus of this paper is to create an assistive device for the visually impaired as well as the deaf to make them socially acceptable without showing their disability to the society by using visible aid. It is incorporated with features like GPS location update, GSM-based messaging system to notify relatives of the location of the user in case of emergency situations and voice recognition based home automation. It uses ultrasonic sensors to detect obstacles and vibration motors to notify the user about the obstacle thus eliminating the use of external device for communication.

Security System of an Electric Motorcycle Based on GSM & ZigBee Communication

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Paper ID: EC-07

The storage of natural fuel is decreasing day by day and burning much of it can cause a massive environmental disaster. In order to save the nature from the disaster people need to think about some alternatives. The concept of making the battery operated vehicles comes as a rescue. The battery operated electric vehicle help in saving fuel and also help in lowering air pollution. Hybrid vehicles are already brought by several automobile manufacturers in market. This proposed system is going to offer an electric motorcycle combined with some security features based on ARM microcontroller, 8051 microcontroller, ZigBee and GSM communication which can be utilized both in Hybrid motorcycles and Electric motorcycles. When the proposed security features will be merged with those vehicles it will be an evolutionary concept in the world of next generation two-wheeler industry because besides lowering the level of air pollution and helping in controlling the use of fuel it mainly helps people to drive motorcycles safely.



Design and Analysis of a Wide Band Rectangular Slot Loaded Planer Microstrip Antenna

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Paper ID: EC-08

This paper presents design and analysis of a rectangular planar microstrip antenna for high bandwidth. The proposed antenna is rectangular in shape with a rectangular slot on the center of patch. The antenna is designed and fabricated with FR4 epoxy substrate. The simulated and experimental results are giving a wide bandwidth of in excess of 4.5 GHz. The measured result also validate the simulate design. A simple analysis is also carried out and impedance is calculated.

Health Monitoring Robot System

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Paper ID: EC-09

Now-a-days there is an increase in elder adult population that should be capable of taking care and need a close monitoring in an emergency situation. There is more demanding for smart system like health monitoring emergency system. This paper proposes a smart health monitoring robot system to provide a secure emergency solution to elder people that is living alone at their home. An intelligent smart real-time connected video communication between patient and doctor and there is a wireless Bluetooth connectivity or wifi connected robot system which can be controlled by the remote. The smart robot system will detect the health, alarm in emergency situations.



IoT Based Smart Waste Management In Smart City

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Paper ID: EC-10

Waste management is the nothing but a managing the waste that is generation, collection, transportation. The issue with the waste management is the overflow of waste before start of the next cleaning process and produce various problems such as bacteria, insects from garbage, contaminates surface water, air pollution and respiratory disease. This method overcomes these problems, and the design is about separating the waste into plastic, aluminum, glass and also monitoring the volume of the waste in the bin using sensors. Each level of the bin is shown on the web page, if the bin is full then an alert message will be show on the web page and also sent to the worker. The position of the bin is identified by using GPS. After the waste is takeoff, the level of the bin is shown as empty and all the sensor values are stored in cloud.

Hybrid Hyper Chaotic System and Cellular Automata-based Color Image Block Wise Encryption and Decryption

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Paper ID: EC-11

This project deals with an image encryption and decryption by dividing the original image into blocks and doing permutation for each block. This scheme based on Cellular Automata (CA). Cellular automata cells are live on a grid. In CA, each cell has its own state and neighbourhood. The drawback of cellular automata is while generating a key for each cell same rule is applied so the hackers can easily decrypt the image. To overcome this drawback one dimensional non-uniform CA is used. During encryption, the keys are generated using non-uniform CA by repeating logistic map 'n' times and hyper chaotic map. The position of pixels is changed using arnold mapping. In diffusion step, by reversing the chaotic map and by using the same key original image is decrypted

Attendance Marking System using Face Recognition & RFID and prevention of Examination Malpractice System

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Paper ID: EC-12

In the present scenario, Every University/College consists of many students, with the increased number of students it is a very tough task for the university to verify attendance manually and control malpractice during the examination. During a written test it is very easy for students to copy. To overcome these problems, in this paper we are going to discuss on Exam Monitoring system with a computer-based examination, attendance verification, and malpractice detection. This system consumes comparatively less time to verify attendance, generates distinct sets of questions for students, monitors during the exam, and the result is stored in the cloud.



Artificial Intelligence Based On Agent Based Modelling With Cyber Security For Remote Operated Vehicle On Dangerous Terrain

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Paper ID: EC-13

A major problem of decision making for autonomous robots is the localization of the robots towards the origin. The point on which the paper is mainly focusing to save human lives, money and conserve the environment too. In the proposed project a firefighter robot is implemented which is efficient to detect fire flame and smoke and cyber security are implemented to secure the data that are recorded in a web page. Here using the RGB to HSV algorithm and motion detection algorithm to detect the fire flame and smoke in python language.

IoT Based Industrial Smart Grid Monitoring Using MQTT Protocol

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Paper ID: EC-14

This paper proposes a novel technique to prevent various forms of electricity theft. Electricity theft can be in the form of meter diversity, billing illegitimate and billing inconsistency. It also brings a novel innovation in the form of a smart meter which is an important invention for the above mentioned problem scenario by monitoring the systems in smart grid and collect the information of electricity uses then establish communication with the consumers which can be useful for providers as well as consumer by using message queue telemetry transport protocol. In additionally it provides real time pricing and monitored usage information to the consumers. A simulation framework has been developed that can evaluate values for energy, current and voltage for various appliances which can be sent to the electricity department as well as consumers to prevent the electricity theft, and also it facilitates in bill payment using RFID.



Air and Water Quality Monitoring Through IoT By Using Aquatic Surface Drone

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Paper ID: EC-15

This project describes Air and Water quality monitoring system on Aquatic form is based on Arduino platform and a multi channel sensor variables are interconnected and in which the certain sensing parameters of temperature , humidity , gas and salt are measured and as well as ultrasonic sensor is measured with the underwater obstacle. The sensing data can be saved on the memory of the surface drone, and accomplished with a web server database. Thus the sensors linking with Arduino board with multiple signal was constrained modules to be completed. The Embedded C software scripts were developed in order to values can be taken from the sensors and upload to a local storage database. The local storage can be connected to a server setup implemented on Arduino level using sensing values reproduced, in which the web server data will always reform whenever there are changes in the sensor values. And also one GUI Android application is developed. The application access to the server database and the assume readings continuously updated for a system administrator. Additionally Android application can be extended to be utilized in the people working area for data conceive and statistical analysis.



Implementation of 32 bit CRC Using 180nm Technology in Device to Device Communication

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Paper ID: EC-16

This paper presents the 32 bit Cyclic Redundancy Checker (CRC) for bit level processing of uplink data that facilitates device to device communication (D2D). Device-to-device (D2D) is the future of wireless technology as it allows the transfer of high data rate among devices with low power and delay. The main advantage of CRC is the error correction capacity along with the error detection. This paper incorporates the usage of digital cadence in 180nm technology. A 90nm channel length is less as compared to the 180nm channel length technology, which subsequently minimizes CRC power calculations in 180nm which would be otherwise be more in the 90nm technology. So, 180nm channel length technology is preferred for power calculations in cadence. The 32 bit message length also acts in attaining the best design for error detection.



Energy efficient routing and peer to peer trust assessment for increasing the network life time in delay tolerant networks

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Paper ID: EC-17

In military network environments is resource-constrained arrange conditions, where end-to-end network is not ensured because of successive deferral, an efficient solution is required for trustful and energy efficient routing. Proposed work, provenance trust based routing is combined with energy efficient route to opt for a high network lifetime. Proposed scheme is designed for peer-to-peer trust assessment and maximize the delivery of correct messages received by destination nodes while minimizing message delay and communication cost Provenance alludes to the historical backdrop of responsibility for esteemed data. Proposed scheme avoids malicious node using provenance model and achieves good network lifetime using energy efficient routing strategy. Node's trust is calculated dynamically in response to changes in the environmental and node conditions.

A Secure Privacy Preserving Data Aggregation Scheme Based on Bilinear El Gamal Cryptosystem for Wireless Communication

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Paper ID: EC-19

In the development of communication system, the data security plays a vital role which involves more randomization and increases the security provided using various cryptographic algorithms. Now-a-days network security has become an important concern. The cryptography techniques are newer and very efficient that can reduce security threat. In this paper, we propose the combination of AES, RSA and Elgamal algorithms which has more randomization in the secret keys to provide information security system against various attacks. It shows the secret messages encryption and decryption process and made authentication. This design supports multiple security levels through different key sizes, power, randomization for data path and key expansion. While the data is transferring from end- to-end wirelessly, the data is being encrypted and decrypted. If an attacker seeks to decrypt an intercepted message may try to find the private key. In such circumstances the seeker needs to compute the algorithm. No actual method exists for this, given certain requirements on the initial group are met. In this case, the data is insecure.

Detection of People Using Ultrasonic Sensor

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Paper ID: EC-20

In this paper, we discuss the detection of people using Ultrasonic Sensor. Since many application like vehicle control, medical applications, robotic movement control, etc are discovered using this Ultrasonic Sensor. This paper helps to detect people and the distance from the destination. This will help in many ways for human by consuming less time. An ultrasonic sensor is the cheapest and reliability among several other sensors. This module of ultrasonic sensor contains transmitter and receiver. A rotating motor is fixed below this ultrasonic sensor to cover the wide range. The ultrasonic signal is emitted from the ultrasonic transmitter periodically in an open area. Rotation motor is used cover 360 degrees. By capturing the signal through the receiver part if the signal ever touches any physical objects by reflecting back. The microcontroller will receive this output and exhibit in the LCD display.



A Secure End-To-End Solution For IoT Based Smart Home

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Paper ID: EC-21

Internet of things is simply the interconnection of smart devices to internet. Various services and applications are supported by IoT such as smart cities and smart homes. Smart devices can inter communicate with other components eg., proxies, mobile devices, data collectors, data sharing. But these devices are having some confined processing capabilities which are endangered to security and privacy issues. To overcome these issues cryptographic techniques, need to be applied to the information that is shared over the cloud (either text or image). In this paper we have applied AES and Chaotic techniques. First image is encrypted using AES algorithm and the text is encrypted using chaotic algorithm and then the text is embedded in image which provides high security for confidential transmission.

A Compact G and U Strip Folded Planar Multiband Antenna for Wireless Applications

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Paper ID: EC-22

In this article, a multi-band rectangular planar antenna for the GPS, WLAN, WiMAX aeronautical navigation system and satellite applications is proposed. The proposed folded G-shaped and U-shaped meander grid provides a compact size with the dimensions of 14 mm × 7 mm × 1.6 mm compared with state-of-art designs. The fabrication was performed for the optimal dimensions. The fabricated planar antenna printed on both sides of the FR4 substrate. It consists of the U-shaped meander grid and G-shaped strip. In that U-shaped meander grid strip printed on the front surface of the substrate while G-shaped strip printed back side of the substrate. These two strips connected electrically without via/hole. Mutual coupling between the two strips provides broad bandwidth. The simulated and measured results indicate that it is resonant at 1.5 GHz, 2.4 GHz, 2.9 GHz, 3.3 GHz, 5 GHz, 6.89 GHz, 7.6 GHz and 9.8 GHz for multi-band applications. The measured results indicate that it competes with the existing designs with more than 40 % bandwidth and minimum return loss. The measured VSWR of the designed antenna is less than 2.5 for all resonant frequencies. During the simulation and measurements, the proposed antenna observed that omnidirectional radiation pattern over the entire operating frequency band. Due to its significant performance, it is suitable for multi-band operations.

Advanced Vehicle Security Control and Accident Alert System

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Paper ID: EC-24

Vehicles are becoming smarter by the combining of greater power to compute connectivity solutions and the improvement in software visions. In modern vehicles automotive designs are interfaced with these features. This particular design includes keyless entry system and immobilizer system as the main weapons to prevent the vehicle theft. But these type of systems provide or detect the unauthorized access of vehicles to a measurable limit only. These security systems have simple and insufficient nature. So automotive theft has been a tenacious problem around the world and a bigger challenge from the expert thieves. This paper proposes an aim to design efficient security control for auto theft prevention system by adding notable enhancement features such as a fingerprint system, password and OTP generating system. It is also included with some rationalizing security features like GPS fencing, remote engine cut-off, and conveying location of vehicle as a message using GSM module. These features are implemented with the help of fingerprint recognition module, GPS Receiver, GSM cellular modem. Along with these feature accident detection module is also added.

Optical Reversible Network and Reconfigurable Router using Micro Ring Resonator

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Paper ID: EC-25

The main objective of this project is to propose the Micro Ring Resonator for reversible computation. Reversible digital circuits provide us the freedom which can be operated even in opposite direction (i.e. from output to the input) without loss of any bit of information. Reversible computation is one of the most prominent research area because of its reduced power consumption. In this project, reversible digital networks using Si Micro Ring resonator has been proposed. This reversible digital circuit will reduce power consumption in conventional digital circuits. With the use of Micro Ring resonator optical reversible logic gates is constructed which can be used for high speed photonic ICs. Because of its optical nature MRR can be used as a router between the processors. In this paper a 4-port optical router is constructed using Micro Ring resonator.

A Low Cost, Data-Oriented Messaging Mechanism with Efficient Task Scheduling for Single Core Processors in IIoT applications

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Paper ID: EC-27

In this faster growing IoT world, M2M communication plays a major role in remote monitoring. It has a wide range of applications like product refilling, for e.g. a coffee machine can inform the vendor when any of its components (milk, sugar, coffee powder, etc.) quantity is running low. When comes to the real time world, the volume of data increases with the rapidly increasing network devices. Increased data rate increases data traffic in the network and affects the performance of the system. The main aspect of M2M communication includes remote sensing and control, logistic services, robotics, data warehouse management traffic control, etc. When comes to industry, the warehouse data plays a major role in the analysis of any failure occurred. Hence logging of data plays an important role in the IIoT. Existing leading transmission protocols, HTTP, UDP, TCP/IP are known to be inefficient for machine to machine communication traffic with lower volume of data as there are frequent communications between devices. Also these protocols don't have any failure handling techniques which doesn't suite for IIoT. Here comes a need for protocols redesign for M2M communications. To cover all these disadvantages, a messaging protocol called MQ Telemetry Transport (MQTT) [1] with Proto threading scheduling is used. To prove the feasibility of the proposed system, a part of the sugar manufacturing process is considered where the raw syrup from the sugarcane is processed in a container to segregate the pure syrup and impurities in it.

A 79GHz Adaptive Gain Low Noise Amplifier for Radar Receivers

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Paper ID: EC-28

This paper presents an Adaptive Gain 79GHz Low Noise Amplifier (LNA) suitable for Radars applications. The circuit schematic is a two stage LNA consists of Differential cascode configuration followed by a simple common source amplifier with an Adaptive Biasing (ADB) circuit. Adaptive biasing is a three- stage common source amplifier to decrease output voltage as input power increases. The circuit is simulated in 180nm CMOS technology and the simulation results have proved that the circuit operates at the center frequency 79GHz with adaptive biasing for adaptive gain. The gain analysis shows a decrease of 35-30dB with an increase in input power -50 to 0 dB. At 79GHz the circuit has achieved the input reflection coefficient (S_{11}) of -24.7dB, reverse isolation (S_{12}) of -3 dB, forward transmission coefficient (S_{21}) of -2.97dB and output reflection coefficient (S_{22}) of -5.62 dB with the reduced noise figure of 0.9 dB and a power consumption of 236 mW.



Design of Memristive Hopfield Neural Network Using Memristor Bridges

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Paper ID: EC-30

Artificial Neural Networks are interconnection of neurons inspired from the biological neural network of the brain. ANN is claimed to rule the future, spreads its wings to various areas of interest to name a few such as optimization, information technology, cryptography, image processing and even in medical diagnosis. There are devices which possess synaptic behaviour, one such device is memristor. Bridge circuit of memristors can be combined together to form neurons. Neurons can be made into a network with appropriate parameters to store data or images. Hopfield neural networks are chosen to store the data in associative memory. Hopfield neural networks are a significant feature in ANN which are recurrent in nature and in general are used as associative memory and in solving optimization problems such as the Travelling Salesman Problem. The paper deals on the construction of memristive Hopfield neural network using memristor bridging circuit and its application in the associative memory. This paper also illustrates the experiment with mathematical equations and the associative memory concept of the network using Matlab.

IoT Based Smart Street Lighting System

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Paper ID: EC-31

In olden days street lights were not operated in an automatic way. Automation of street lights has become apparent these days. But we can notice that we do not require high intensity light during night hours, i.e. when there is no traffic, no people in the streets or on roads and even in the early mornings. As per requirement, the light intensity can be reduced using dimmer circuit. Light dependent resistor (LDR) sensors are used to sense the darkness and Passive Infrared (PIR) sensors are used to detect the objects. Raspberry Pi (Master node) and Arduino (Slave node) will communicate each other and they help the proposed system to work more effectively. Current sensor and Voltage sensor are used to measure the current and voltage respectively. By reducing the intensity at these times, energy can be saved to some extent and the data is uploaded to the cloud. We can monitor and control the street lights in a smart way as per our requirement. Fault detection, minimization of cost, reducing the loss of electricity and man power are also possible. Hence, this proposed smart street lighting system will be helpful to the society in cost effective way.

Implementation of SIFT for Detection of Electronic Waste

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Paper ID: EC-32

The paper focuses on the investigation of image processing of Electronic waste detection and identification in recycling process of all Electronic items. Some of actually collected images of E-wastes would be combined with other wastes. For object matching with scale in-variance the SIFT (Scale -Invariant- Feature Transform) is applied. This method detects the electronic waste found among other wastes and also estimates the amount of electronic waste detected the give set of wastes. The detection of electronics waste by this method is most efficient ways to detect automatically without any manual means.

Doubly Fed Induction Generator based Wind Energy Conversion System using Matrix Converter with Model Predictive Controller

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Paper ID: EE-01

The doubly fed induction generator (DFIG) has become the most suitable power generation element to be used with the wind turbine as it offers the advantages of sturdy mechanical structure along with exhibiting high overall efficiency. A matrix converter of the direct conversion principle with 18 switches along with the Space Vector Pulse Width Modulation System (SVPWM) can be used with the DFIG managed by a predictive control strategy. The rotor speed fluctuations and the stator current fluctuations can be checked to be under prescribed limits with the predictive control strategy. The proposed system of predictive control has been demonstrated using simulation carried out in the MATLAB / SIMULINK environment. The proposed control strategy, when used in a grid connected system exhibits improved power quality in terms of the Total Harmonics Distortion (THD) of the grid injection current as compared to the fixed band hysteresis controller.

Prediction of Passwords based on Affinity between Personal Information and Passwords

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Paper ID: IT-01

While it is not suggested, internet users wish to include personal information in their passwords for easy recollection. In this paper, we disjoint user passwords from a Chinese website to inspect the intensity to which personal information resides in a password. Then we introduce a new metric called inclusion to gauge the dependency between personal information and passwords. Afterwards, based on our analysis, we propose Personalized-PCFG as an extension to the Probabilistic Context-Free Grammar method to be semantics-rich. We demonstrate that Personalized-PCFG cracks passwords much faster than PCFG by generating personalized guesses and makes online attacks much more likely to succeed.

Outlier Detection using Clustering Techniques

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Paper ID: IT-04

An outlier is nothing but a pattern which is dissimilar with respect to the rest of the patterns in a particular dataset. In some applications it is very important to understand and identify outliers. Detecting outlier is of major importance in many of the fields like cybersecurity, machine learning, finance, healthcare, etc., In this paper a clustering based method is proposed to capture outliers using different algorithms like k means, PAM, Clara, DBScan and LOF on different data sets like breast cancer, heart diseases, multi shaped datasets. This work aims to identify the best suitable method to detect the outliers accurately.

Authentication and Overhearing to Prevent Internal and External Attacks in WSN

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Paper ID: IT-10

Wireless Sensor Networks are usually the assortment of sensors, which are versatile in sensing the data based on multihued exertions. The cardinal bulge with the sensor networks is its dispersed nature. Since they are spread over, they sense and forward data from their dispersed areas. They consume high energy resources and vulnerable to various attacks. To prevail this bulge, source identity (signature) based authentication scheme is proposed on ECC to prevent external attacks and a neighbor monitoring scheme is proposed by overhearing to prevent internal attacks. Now the cardinal strike with the sensor networks are its bounded energy resources, they have a very limited / less energy resources, they cannot have a hefty application assignment. To prevail this strike and to improve the energy efficiency, a low energy consumption MAC protocol is acquainted called the IEEE 802.15.4 / ZigBee standards on the MAC layer, through which the data forwarding among the networks devours very low energy when compared to all other traditional methods. The main objective of the proposed work is to perform broadcast after authentication, to prevent resource consuming attacks through authentication externally and to construct a monitoring table for each node by overhearing and detecting them based on their activities if they are malicious to provide internal security to the network. The proposed work attains a minimal energy wastage along with security integrated in WSN communication. The ratio of efficiency comparisons of the broadcasting authentication scheme and monitoring scheme for the traditional and the proposed works for the factors secure authentication / monitoring and energy consumption is resulted to be as 7:2. Thus the proposed system has a higher endorsed based on the generated results

Secured and Privacy Aware Content Sharing in Cloud

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Paper ID: CS-102

Cloud based computing solutions are gaining most importance as it requires low-maintenance and holds commercial uniqueness. By means of many authoritative data centers, it is now possible for Cloud Service Providers (CSP) to express various services to cloud users on demand. The data is stored typically by the Cloud servers in minimal cost thus making the service available all around the clock over the internet Cloud. Hence, two factors such as security and privacy are always very essential in case of cloud computing. The fundamental principle clarifying these aspects can be provided by the existing system to ensure responsive and confidential users against untrusted server for file and data encryption even prior to data upload in the cloud server. This paper mainly focuses on privacy and secured sharing of content on cloud.

Examining Heuristics for the K-Centers Problem

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Paper ID: CS-113

In this paper, we discuss and analyze the heuristics existing to solve the K-Center problem. The K-Center problem is used in various practical scenarios such as facility location, load-balancing, ATM mapping, Cloud Server Selection, or even data clustering and image classification. Specifically, we examine a standard Greedy algorithm with an approximation factor of 2, the clustering algorithm introduced by Gonzales in 1985, and the Dominating Set Algorithm (commonly referred to as the elimination heuristic) devised by Jurij Mihelic and Borut Robic. We also propose a new heuristic to solve the specified problem using Tree-Independent Dual-Trees devised by Ryan R. Curtin.

Smart Recycle Trash in an IOT Management System for Smart City

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Paper ID: CS-130

The significant rise in the population is leading to urban migration issues and due to the change in lifestyle, huge amount of waste is being generated. Therefore, waste management is a huge problem faced by the countries across the globe. The overall waste management contains three fundamental types of existences: residents who generate garbage, waste collectors & city administration, stakeholders. Waste management recycling and dumping industries has its impact directly on the lifestyle, health and environment. Current waste management modes are not advanced enough for a powerfully built framework and efficient waste management mechanisms. Therefore, it is important to manage waste in a smart way. In this paper, a novel and smart cloud-based waste management system using internet of things (IOT) mechanism is dealt in which the trash cans are fixed with sensors, that can notify the waste level status and the data related to status is uploaded to the cloud. This system uses two types of trash cans for Biodegradable and non-biodegradable waste materials. Individual waste is generated along with total waste. A interface is used to connect the residents in an area and the administrator which looks after waste management. The project strives to reduce human intervention in garbage collection, while the statistical representation of data collected is used for future learning.



Technological Adoption in the Agriculture Sector for Societal Upliftment in India

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Paper ID: CS-136

Agriculture is the base sector on which the Indian workforce mainly depends. This solution aims to ease the farmer's day to day life. It will not only help farmers to grow their business but also to have a better work life balance. With the help of this platform, farmers could directly connect to consumers. It is a platform through which buying and selling of agricultural produce will take place between consumers and producers. This would lead to the elimination of middlemen, increased profits for farmers and cheaper produce available to the public. Since India has people who speak different languages therefore we have regional language support to make farmers feel right at home. Speaking about homes, farmers coming from different regions have their own agricultural needs. Farmers get personalised data and news feed with regular weather updates. The system consists of Personal Voice Assistant for the farmers to ease the interaction process. For ease of access and security, fingerprint login is implemented.

An Efficient Automated Road Region Extraction from High Resolution Satellite Images using Improved Cuckoo Search with Multi-Level Thresholding Schema

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Paper ID: CS-179

In this paper, we present an improved cuckoo search optimization algorithm for extracting road regions from high resolution images using multi-level thresholding schema. Automatic road region extraction from high resolution satellite images automatically neglects sharpening the image segments since the available information is with high pixel values. However, occlusion and overlapping of objects are yet another a challenging task in segmenting the roads from available images. And also identifying the number of threshold values which defines all type of roads (main roads and roads alongside main roads, etc.) increases the complexity of the problem to define exact road region. In this proposed method, multi-level thresholding concept is applied for efficient road region extraction (Otsu). After finding the number of available threshold values to be segmented, an improved cuckoo search optimization algorithm is incorporated for finding the optimal threshold value for extracting the road regions from the given image. The conventional multiclass SVM classifier is used for efficient extraction of road regions from the given images. This proposed methodology will be tested with three developed sub-urban region satellite images and the results are compared with existing segmentation algorithms.



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Prediction of Electricity Consumption in India

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Paper ID: CS-180

Electricity consumption forecast plays a vital role in policy making of developing countries. In this paper, the electricity consumption rate is predicted using different machine learning techniques like Support Vector Machine (SVM), Artificial Neural Network (ANN), and Linear Regression with the help of Time Series Model. The work is done for Republic of India. The data set are collected from the government of India website (data.gov.in), World Bank Treasures and others. The research objective is analyzing the electricity consumption rate in past years to predict future consumption. The result will help citizens of India to understand the current scenario of power production and consumption in India. It can also help government/private officials to take decision on future plans for power plant projects.

Analysis of Statistical Data Aggregation Schemes In Mobile sensing Applications

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Paper ID: CS-31

The rapid growth and development in mobile devices such as smartphones giving so many mobile sensing applications. The mobile sensing system includes a lot of sensors with restricted power, computation, memory and communication capabilities. Keeping the privacy of user data in mobile phone is extremely important for mobile phone sensing applications. In mobile sensing system, privacy-preservation is more challenging, particularly at the time of data transfer and data aggregation, Data aggregators execute few aggregation computations on sensing data. Data aggregation is one of the major strategy, it reduces the communication and computation load in sensing node at the time of data collection in a mobile sensing applications. In this paper, we are focusing on the privacy-preserving data aggregation schemes in mobile sensing systems. At first, will classify the previously designed privacy-preserving data aggregation schemes into multiple classes on the basis their different privacy-preserving data aggregation methods. After that the comparison of different methods on the basis of performance analysis like as the communication time, data privacy, power consumption and accuracy of data etc. likewise, based on the previous work.



Network Anomaly Detector using Machine Learning

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Paper ID: CS-48

The 4G network consists of a network of routers on each tower that decides where a certain packet must be switched to. These routers like any other hardware device is subject to failure due to number of factors such as threshold violations and problems with its tuning. The routers and other relevant hardware devices undergo various maintenance cycles that can sometimes be wasteful as the hardware may be replaced even when in complete working condition. This is a measure taken to ensure the network is always up and running. This measures has proven to be expensive and alternative solutions have been looked for. To alleviate the costs involved in the maintenance of these routers, a system will be developed to perform applications such as report failures, find the root cause and implement a remedial action automatically. The prediction of failures in the routers is achieved by unsupervised machine learning while will be trained to pick up anomalies from a continuous stream of log messages sent to system which is then analyzed. The anomaly data is then used to schedule maintenance runs more effectively.

Sentiment Analysis Using Machine Learning Technique Through Twitter Streaming API

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Paper ID: CS-83

Social media allows to share the experiences with many best suggestions. It provides opportunities to share the ideas about any topics at any time. In the current trending, twitter is used to gather different kinds of information as user need and it is a social network service which enables the user for better communication and gaining of knowledge. Accurate representation of the user interactions can be done based on the facts semantic content. The pre-processed tweets which are stored in database are been identified and classified whether it relates to the user keywords related posts. The best suggestion using polarity can be predicted using the user keywords. For the interactive automatic system which predicts the tweets posted by the user this system deals with the challenges that appears during the sentimental analysis. It deals with effective study prior to the subjective information. The basic task in this is to identify the polarity of a given tweet in the sentence whether it is positive, negative or neutral. However the polarity of the tweets has been identified, it was difficult for us to check with the meaningless data. To address this challenge the extracted tweets are been pre-processed by replacing the full form instead of short term words. The better performance can be achieved using more training data. However the analysis was frequently done using the previously stored data, it was a challenging task to do it using the streaming data. There are very few works related to the sentiment analysis using online streaming data. In this paper, we propose that the sentiment analysis can be improved using the online streaming data. For online streaming data all the data related to the given topic will be collected according to the current data in the twitter. For better up-to-date analysis, streaming data are used and it can also achieve better results. In contrast by conducting the continuous learning from the streaming data, this approach provides better results than the traditional way of using the training data and it achieves the overall performance and computational efficiency.



Advanced Graphical Passwords Using Captcha

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Paper ID: CS-93

Lot of security schemes using mathematical functions. Now a day all existing security primitives are using Artificial Intelligence ideas, yet under developing. Here we introduces an early and developing basic security elements based on Artificial Intelligence ideas, specifically, a graphical secret key with solid basic structures, which bigger things can be built based over Captcha invention of new things, and it is called Captcha as graphical passwords (CaGP). CaGP tends to different security issues by and large, for example, guessing attacks, relay (from one place to another) attacks, and, if joined with double view inventions of new things, bear surfing attacks. CaGP also provide a new method to handle important issues in picture hotspot graphical key. Pass Points, that regularly takes weak decisions. CaGP isn't a medicine however it offers computer programs for improving on the web security.



Traditional vs Computerised Methods to Recruit Football Talents in Soccer: A Review

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Paper ID: CS-95

While no one contends that the use of data in football will ever be perfect, it certainly continues to become more insightful and influential. Soccer clubs that possess the capability of recruiting and improving talented players to reach their fullest potential often tend to have a lot of advantages financially and at the same time compete with other clubs, performance wise. However, in most clubs, the players are still manually chosen through scouts and coaches' suggestions and based on raw player statistics. The use of data back then was limited due to its availability but at present the data collected in sporting events are massive and it will be a mistake not making the most out of it. Soccer talent detection and development has become an extremely important matter for many clubs all around the world. The following review of literature confirms that there is a need to gain a better understanding of the whole process of talent detection and development in soccer.



Effective Stack overflow Tag Prediction and Analysis using Big Data

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Paper ID: CS-111

The amount of tags used to detect post have been increased and these tags provide an option to search our posts more quickly. Earlier, we used to create tags manually, but now we have developed a predictive model to generate the tags automatically. We explored Stack overflow dataset by using ACT-R(Adaptive Control of Thought—Rational) model inspired by Bayesian Probabilistic Model with an aim to increase accuracy by using Logistic Regression Algorithm.



Manipulation of Knowledge Representation by using Propositional Logic

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Paper ID: CS-146

Knowledge representation is dedicated to representing information about the world in a form that the computer can utilize to perform designated tasks. This research paper focuses on comparison of different knowledge representation techniques, so as to identify the most ideal method for the same. Predicate logic is decided as the most efficient amongst the existing techniques, but proves to have its own drawbacks. Hence a method of manipulation is suggested so as to handle these disadvantages of predicate logic. The proposed system employs a new algorithm which makes use of propositional logic. The algorithm helps the system identify the connection between the input given, and correlates them so as to obtain the desired answer when a question is put forth it. The algorithm involves breaking down the input using predicate logic, and then applying the laws of propositional logic to arrive at a conclusion. Hence the proposed method enables the system to be smarter.

Human Activity Recognition using Web Based Search Engines and Computer Vision API for Smart Homes

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Paper ID: CS-149

Human activity observation and identification is of high importance in the field of smart home automation. It is highly essential to maintain confidentiality in monitoring activities of daily living (ADLs) performed by people in their houses. As of now, the current approach to ADL recognition have several limitations that limit their application in real world scenarios of smart homes. In this project, we have a surrogate method, which comprises of mining the ADL models from the Web. Already existing approach in this method are focused on Web page mining for textual content and lexical analysis of the textual content. These attempts face the persistent problem of high level of noise and unreliability of content found in textual data present on the web pages. To conquer this, we focus on the images depicting the activity being carried out, which presents a visual and more expressive description of the activity compared to textual content present on the Web pages. Hence, we aim to achieve human activity recognition for a regular household using the Web-based activity mining based on image searches through image mining from the web and computer vision APIs in order to perform an efficient and effective activity recognition in the pervasive computing domain of smart home automation. The method proposed here depends upon search engines such as (e.g. Google, Mozilla, etc.) to search and display highly related images for each queried activity. Computer vision APIs along with a lexical database is required to extract the key objects that are appearing in searched images. Probabilistic technique is used to point out the degree of relationship or relevance between the identified objects and the activity that is being performed in the image. The project is implemented and tested on a large dataset of real-world ADLs which are executed in a smart-home. Thus, the project focuses on implementing a better approach for activity recognition via Web-based activity mining, which relies on images present on the web pages rather than textual content present on the web pages.



Hadoop Framework Modelling for Monitoring Over Large-Scale Coal Plant Processes

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Paper ID: CS-150

Modelling a system to deal with a large set of data comprising the industrial processes and having an over watch is the main objective of the project. It is achieved using implementation of parallel component analysis approach over a large distributed system. To handle this large volume of data, it is first segmented into blocks i.e. worked over a distributed fashion with some prior method data. Then for modelling and computational purpose in each block, parallel and distributed strategies are projected supporting the Map Reduce framework for extracting the principal elements. This results in application of mathematical modelling over large-scale processes reducing the actual complexity of the framework

Detection of Node Failure Localization in Communication Networks

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Paper ID: CS-157

We explore the capability of localizing node failures in communication networks from binary states (normal/failed) of end-to-end paths. Certain a set of nodes of importance, individually localizing failures inside this set necessitates that dissimilar noticeable path states connect with dissimilar node malfunction events. However, this circumstance is easier said than done to test on huge networks due to the requirement to itemise all promising node failures. Our first donation is a set of satisfactory/compulsory conditions for classifying a restricted numeral of failures within an uninformed node set that can be experienced in polynomial time. In adding up to network topology and positions of monitors, our circumstances also include restrictions forced by the penetrating mechanism used. We are here considering three probing mechanisms basically which differ according as to whether dimension paths are: (i) arbitrarily controllable; (ii) controllable but cycle-free; or (iii) uncontrollable (which are dogged by the evasion routing protocol). Our second donation is to calculate the potential of malfunction localization from beginning to end: 1) the utmost number of failures (wherever in the network) such that malfunctions inside a given node set can be exceptionally localized and 2) the major node set inside which failures can be exclusively localized underneath a given vault on the total amount of failures. Here both the methods in 1) and 2) can be transformed into the functions of a per-node property, which can be computed resourcefully based on the above satisfactory/compulsory conditions. We reveal how process 1) and 2) projected for enumerating malfunction localization capability can be used to calculate the collision of various parameters which includes topology, number of monitors, and probing mechanisms.



Design and Implementation of Smart and Low Cost Multi-task Farming System Using Arduino

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Paper ID: CS-168

The project describes the smart farming system using the concept of IOT. The project uses a Wi-Fi module (or GSM) which connects the system to internet. This module controls a motor and two solenoid valves for supplying water to the field on the information obtained from a water level indicator and soil moisture sensors. This whole system is monitored and controlled by MQTT server (My MQTT android App) through internet. The project also depicts the concept of Internet of Things (IOT) the system does the work like weeding, spraying water, harvesting, etc. The system also does the work like determining the humidity of the soil and measuring the physical environmental factor which can be monitored by any individual from anywhere they want and the data gets recorded in the database of the webpage or the app through IOT connection and the individual gets a notification on their cellular phone through message so that he can operate the system through a push message or can be done through the mobile app if there is any requirement to the field that to be taken care of.



Improving the Efficiency of Container Management Using Docker

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Paper ID: IT-09

Data center and computing infrastructure is becoming more complex every day and highly essential to the success of businesses. Data center design has shifted away from the traditional large expensive setups on the IT floor space to smaller component-based solutions, from traditional private data centers to public and private clouds. A variety of options are available to run and build IT and software projects. Docker is one of the most successful open source project in recent history. Due to the fact that many applications can be run within a small space, organizations of all sizes are moving towards applications run in containers. We oftentimes hear people describe Docker containers as “lightweight VMs”. Virtualization and Containerization have similar characteristics. Both are designed to provide an isolated environment in which to run an application. Additionally, both the environments can be represented as binary artifacts that can be moved between hosts. Docker containers share the underlying resources of the Docker host. Furthermore, developers build Docker image that includes exactly what they need to run their applications: starting with the basics and adding in only what is needed by the application. Using this, we can deploy our application to the infrastructure that best meets the needs of the application and the business goals- whether it’s the cloud, datacenter or to a virtual machine.

Advanced Route Recommendation System

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Paper ID: CS-104

With the increasing popularity of online maps, day by day people are demanding accurate and more efficient systems. So, we aim to provide the user with the system as above-mentioned characteristics. We used "travel" as the part of research and saw that generally, prior works relate to providing rating and ranking of indexes of particular location but our paper provides a rating of a route which would help the user to plan a trip accordingly as per their choices. This would be more efficient instead of ranking or rating a particular place. This work comprises of data mining and its concepts which include mining of keywords after their extraction and then ranking the route. This keyword extraction is used when the people who traveled the route previously and reviewed it. So, finally, in this paper, we propose an advanced travel route recommendation system where the reviews are taken from the user about the route and they also provide a rating to the route based on their experience. This data is collected and is shown to another user (if requested for the same route). To provide better results routing algorithm is used. The routing algorithm is used to pinpoint the location with the help of Google map and also helps in finding the location. The keywords from the reviews of the user are extracted and are explored using spatial keyword query. The spatial-keyword query is used to combine the related words with one another and process the data according to it [1].

Student Performance Enhancement Through Educational Data Mining

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Paper ID: CS-105

In today's era education plays an important role and as we know today the level of education is degrading and need to be improved as today's generation is very smart to work and intelligent. So our project focuses on the same and helps in enhancements of student performance through different concepts of data mining. There are many prior works which focuses on the existing education system but are not efficient enough to bring a change because to improve education, first thing that need to be brought into practice is student personal analysis. Hence, our project focuses on the same and with the help of data mining concepts we tend to improve education and also enhance the education system by analyzing student performance. We actually used a modified form of Naïve Bayesian algorithm. This algorithm uses both the behavior and marks of the student and analyses it and finally gives the result. At last we also provides graphs because according to research it has been proved that a graph directly helps in analyzing things in a positive manner and is a good tool to work with.



An Extensive Survey on Prominence of Hadoop Map Reduce in BIG DATA Processing

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Paper ID: CS-72

Across the years, enormous amount of data has been produced due to the rapid increase of computational power. Moreover with the advent of Web technology, data of any form can be easily provided and consumed by users. This has called for a prototype shift in the architecture and big data processing techniques. This comprehensive survey paper collates and outlines the algorithm and performance computation in various published technical articles and papers. Apache Hadoop proves to be the future of the database because of its storage and processing of large amount of data which will not be possible with the traditional database. It is a highly scalable platform due to its capacity to store besides administering data across many inexpensive servers operating in parallel. MapReduce can work on different data types be it structured or unstructured. Moreover large amount of data is processed within a short span of time due to parallel processing. And the retrieved literature reveals that fault tolerance and simple model of programming is one of the biggest merits offered by Hadoop.

Performance comparison of machine learning algorithms analyzing patterns of neural response to object categories

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Paper ID: CS-94

Machine learning (ML) has end up being a built up apparatus for unscrambling utilitarian neuroimaging in- formation, and there are presently confidences of completing such errands competently progressively. Towards this goal, this paper discusses about accuracy of three various ML calculations connected to neuroimaging information acquired from Haxby dataset. Most extreme accuracy was accomplished by Logistic Regression in greatest cases, trailed by Ridge and Support vector classifier. For constant interpreting applications, finding amiserly subset of analytic ICs may be valuable. This paper connects the enhanced ML calculations to these new information cases, and found that characterization exactness result were reproducible. Before applying measurable figuring out how to neuroimaging information, typical preprocessing must be connected. For fMRI, this incorporates movement amendment, cut planning redress, co-registration by means of an anatomical picture alongwith standardization to a typical format similar to the ‘MNI(Montreal Neurologic Institute)’ one if fundamental. Reference virtual products for these undertakings are SPM [1] and FSL [2]. A Python module to these apparatuses is accessible in NILearn Python library [3].

Aadhar Verification using Salt and Pepper

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Paper ID: CS-175

Whenever a user enters his/her password for the first time, the database stores this password in hashed context. Storing of passwords as plaintext can pose a risk to security as malicious hackers can gain access to these passwords in the event of the database being compromised. Therefore, storing of passwords or other sensitive information in the database must be done only after proper hashing has been done. However, there is a degree of risk associated with the above methodology as the plaintext password can be retrieved by using rainbow tables (pre computed tables used for reversing cryptographic hash functions). To combat this, we hash the password combined with a randomly generated string of alphanumeric variables called SALT. SALT is prepended to the password along with PEPPER (a random letter from A-Z) and then the hash is calculated, which is further stored in the database. Therefore, when the user wants to login again, his details are verified in the following manner: The username and password entered by the user is prepended and appended with the salt stored in the database. Then we append pepper, followed by which the hash calculated and encrypted using AES and stored. Finally, decrypt the AES and compare with hashed password entered by user, if they both are equal then the user is authenticated.



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IoT- Save The Community Project

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Paper ID: EC-18

IoT offers elaborate structures that combine multiple disperse additives towards their synergetic use. The machine suggested within this paper is an answer to track the environment conditions at a selected location while allowing the facts to be seen everywhere around the globe for the propagation of statistics in absence of any current infrastructure. Emphasis is given on how sensing and communicate technologies of IoT can successfully be utilized in case of catastrophe control. The hardware of the module used for this motive is studied and elaborated in a detailed way.



Brake Failure Detection and Electronic Auxiliary Braking System

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Paper ID: EC-26

Brakes are the integral part of a vehicle, which are used to reduce the speed of the car. Brake failure is one of the major problems, which lead to several accidents. Brake failure occurs due to brake lining fails, which leads to pressure loss. This mainly occurs in pneumatic brakes, which are used in most of the vehicles. The aim of our paper is to diagnose the faulty braking system and to enable the functioning of auxiliary braking or secondary brake system during brake failure. When the primary pneumatic brake fails the pressure sensor detects the brake failure and gives warning signal to the driver and also enables the auxiliary brake, which can be controlled by the driver manually through a manual control board. This braking system ensures the safety of the driver as well as the passengers without causing any damage to the vehicle.



Predicting Students' Performance Using Bayesian Classification Algorithm

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Paper ID: CS-02

To limit the number of students who might end up failing a class, there is a need for new and improved performance prediction system, which can help us identify the students who are lacking the minimum grades and then focus on them to improve their results. In the field of data science, there are various techniques to extract information through data including predictive methods, association rule mining etc and the main focus of all of them is to fetch important insights which can be used to deal with students' performance prediction. With lots of features available, students performance like who will pass and who are likely to fail can be predicted. In this work, we have adopted Naïve Bayes classifier to predict the marks/grades for future assessments.



Recommender System Based on User's Transaction and Browsing History Using Text Analysis

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Paper ID: CS-23

Recommendation systems have now become a necessary tool for every E-commerce company. Today's E-commerce company's use state of the art machine learning and deep learning techniques like Collaborative filtering. These recommender systems are not easy to compete with because they are trained on huge datasets. But however, high accuracy can also be achieved, if we pre-process the dataset and apply a probabilistic model and a sentiment analysis model which work together on the given dataset. A probabilistic model was applied to give recommendations on what products should be shown to a customer on the basis of his actions on the website. A sentiment analysis model was applied on the titles of the product to recommend items when a customer buys an item which is bought occasionally by an average customer, for ex. A laptop. This model was implemented using word2vec technique and can be applied in various ecommerce companies which don't have very large computing power. The accuracy of the proposed model can be increased by training the model on larger datasets.

Aspect Based Sentiment Analysis of Amazon Product Reviews

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Paper ID: CS-24

Product feedback is a very crucial point when a customer/consumer decides to buy a product or service. Therefore, identifying an individual product with its unique features and analyzing how each feature is defining the product could be an important way forward to making informed decisions. On the other side companies are on the constant lookout for individual reviews for their products and services to improve and get feedback about their products to build their market strategy afterwards. Therefore, it has become very important to analyze the data present and create the procedures to automatically classify these sentiments for the respective products/services. The approach of sentiment analysis can be used to classify the sentiments of various users on each product. Identifying each feature is an important step to analyze and then determine the sentiment of the product in terms of its individual features for the user to gain an understanding about the product details. In this paper, machine learning methods were used to extract information from the online reviews posted by customers. The main emphasis is to label a feature-wise score for each product depending upon the individual reviews.



A Survey on IoT Based Health Care Monitoring Systems And The Security Challenges

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Paper ID: CS-41

Advances in technology and innovations opens to the exposure of Internet of Things (IoT). There is a large verity of application domain for IoT, which include healthcare. The utilization of IoT advancements in healthcare system, provide simplicity to specialists and patients, as it can be utilized to different areas, for example continuous monitoring and patient data administration. An effective real time monitoring of patient's health and it can monitor by the physician and nurse. The exposure of IoT devices against threats, with limited resources and technologies, together with the lack of specifically designed IoT standards, represent a base for the expansion of specific cyber threats. Along with that, security and privacy issues have become the greatest challenge in the IoT topic. Here, we analyses different IoT healthcare systems based on the platform, architecture, technologies used, data transfer methods and the security it offers to secure the data.



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**Secure Communication Through Internet of Things
in Industries - A Survey**

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Paper ID: CS-50

The most recent technology that allows users to connect anywhere, anytime, anyplace and to anyone is Internet of Things(IoT). It is the network embedded with electronics, software, sensors etc. IoT allows these devices to collect and exchange data. Present trends promise advanced business models and observe user understandings through robust connectivity and then we can effectively use embedded devices of next generation by using IoT. The large amount of security critical and privacy-sensitive data generated, processed and exchanged by embedded devices is the most eye-catching target for attacks. Cyber attacks are very critical in IoT system as they can cause physical damage and even lurk human lives. These systems are very complex and the effect of cyber attacks bring a new threat to these systems. This survey is on the importance of industries being smart and secure and also to evaluate the challenges faced in context of performance and security.



Comparitive Analysis of Malware Detection Using Machine Learning

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Paper ID: CS-60

There has been continues growth in the number of malwares found over the cyber world in the last few years. Malwares of this generation are evading the anti-virus detection and analysis using sophisticated techniques named polymorphism and metamorphism. Detecting malwares based on their execution and behaviour becomes important in handling it. Most Anti-virus depends on signature based detection which is easy to evade and this doesn't work particularly for Zero-day exploit malwares. Static analysis looks to detect malware without executing them where as Dynamic analysis executes the malware in a sandbox environment and logs the system changes done by the malware. In this we are adopting a hybrid approach where we integrate the features extracted from the static and dynamic analysis to detect the unknown malware. Our results showed greater rate of finding malwares while the amount of samples were increased.

Audio Hiding Using Adaptive Image Filtering and Adaptive Image Segmentation Based Image Steganography

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Paper ID: CS-33

Information Security has turned into a basic zone in software engineering because of the continually developing requirement for secure correspondence. Existing strategies for security like scrambling the message through encryption techniques has turned out to be defenseless against dangers. A more complex framework is required to keep up the mystery and that is refined utilizing the technique for steganography. Steganography is the workmanship and investigation of data stowing away and undetectable correspondence. The mystery information to be transmitted is covered up in another medium to accomplish twofold security. Steganography calculations incorporate two fundamental segments specifically, inserting the mystery message at sender side and separating the implanted message on the beneficiary side. Steganography technique is moreover strengthened by encoding the message before inserting utilizing AES calculation. In this paper, the utilization of three separate layers of security to finish the most elevated amount of secure transmission is clarified.



Development of ArcPy based Customized tool in GIS for Seismic Information System

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Paper ID: CS-97

Earthquake is defined as a natural catastrophic event, where a sudden rupture is induced by the movement of the earth's crust creating a fault or a fracture along its surface. This sort of an event has an upheaval to the properties and life. In general disasters are beyond the control of human existence and can possibly not be eradicated. There are certain factors, where the control can be taken over with the help of certain technologies and methods to predict the events at an earlier stage. This paper proposes a model where a Python based Customized toolbox is created as an extension tool to ArcGIS that helps to understand the spatial sub surface events through the development of Seismic Information System.

Survey on Early Detection of Autism Using Data Mining Techniques

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Paper ID: CS-98

The children of today are the future of the nation and there are many hurdles in their development like ASD. ASD (Autism Spectrum Disorder) is a neurological disorder which has a lifetime impact on the basic skills and talents of a human being. The foremost goal of the paper is to know the number of people suffering from autism and the various symptoms of autism.

Survey: Cloud Computing Storage Through Dual Protection

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Paper ID: CS-99

The expansion sought after of the web use and the requirement for clients to get the documents in a brought together framework, we have the idea of distributed storage set up. The simple entry in this open cloud framework is easy to follow however the information and security danger while sparing the records is faulty. In the current framework, the records were put away as a full set in an open stockpiling framework where the information burglary to get the total document is conceivable. Odds of the record being altered by outsiders are again unavoidable and to check the first document, we require an outsider to be required on the same, again the procedure will be unsafe for conceivable information burglary. To conquer this we have the proposed framework set up with the 3 level of security that is given out in the open distributed storage. Records are put away somewhat in an encoded organize. Realness of record is checked from the token produced at the season of each transferring done by the referral parties and the first proprietors. Consequently this proposed framework will totally stay away from idea of information robbery and gives greater security to the information's under the distributed storage framework.

A Comprehensive Study on Sarcasm Detection Techniques in Sentiment Analysis

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Paper ID: CS-112

During past few years, there has been a lot of increase in opinionated textual data in social media over the Internet. Sentiment Analysis is used to analyze the opinioned text. It helps us to understand (text) the emotion behind the writer. It is facing many challenges and Sarcasm detection is one of the major challenges in it. Sarcasm is the unconventional way of conveying a message which conflicts the context. It can lead to a state of ambiguity. Data pre-processing is one of the primal works implemented by many researchers. Many data preprocessing techniques such as tokenization, stemming and lemmatization, removal of stop words is done by many researchers. Several research works have been done on sarcasm detection. Many feature extraction techniques were implemented. Several classifiers are used in various researchers such as Support Vector Machine (SVM), Naïve Bayes, AdaBoost, Random Forest etc. Results are included in papers such as accuracy, precision, recall, F-score reflects how better the model is. This paper will brief various methodology and techniques used in sarcastic text detection for Sentiment Analysis.

Survey of Extractive Text Summarisation Techniques

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Paper ID: CS-115

Text Summarisation is the process of extracting important information from large documents, and producing a shorter version that precisely summarizes the text. There are two types – Extractive Text Summarisation and Abstractive Text Summarisation. Extractive Text Summarisation extracts important words, key phrases, and sentences, and forms short summary using the same. On the other hand, Abstractive Text Summarisation uses techniques such as Natural Language Generation to create an abstract synopsis. This paper focuses on various Extractive Text Summarisation Techniques.

Implementation of Magic Mirror using Raspberry Pi 3

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Paper ID: CS-116

This paper describes the designing and implementation of an interactive wall mirror, called “Magic Mirror”. It is a device that can function both as a mirror and an interactive display displaying multimedia content such as time, date, weather and news simultaneously. The user can interact with it using voice commands. The Magic Mirror includes speech recognition, face detection/recognition, hidden LCD mirror, and camera to perform various tasks and to capture information on real time basis. The user can interact with magic mirror using voice commands.



Approaches to Clustering in Customer Segmentation

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Paper ID: CS-117

Customer Relationship Management(CRM) has always played a crucial role as a market strategy for providing organizations with the quintessential business intelligence for building, managing and developing valuable long-term customer relationships. A number of business enterprises have come to realize the significance of CRM and the application of technical expertise to achieve competitive advantage. This study explores the importance of Customer Segmentation as a core function of CRM as well as the various models for segmenting customers using clustering techniques. The available clustering models for customer segmentation, in general, and the major models of K-Means and Hierarchical Clustering, in particular, are studied and the virtues and vices of the techniques are pointed out. Finally, the possibility of developing a hybrid solution by the combination of the above two techniques, having the ability to outperform the individual models, is discussed.

Inappropriate Post Removal From Social Networking Sites

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Paper ID: CS-122

Spams and unwanted posts is a serious problem faced by many users of social media network sites. Many methods have been used to tackle this problem. But there is no system which can automatically find out and get rid of spams without bothering the user. All the current systems requires user to report the spam and then wait for the admin to take some action. If user doesn't report the post it doesn't get addressed. It is a slow process. By the time they remove it lots of people may already have seen it. To avoid this kind of problems, we propose a system which automatically detects the spams and blocks it. It can also block the spammer if the spammer keeps persists on posting the same thing. It takes less time than the existing system and it doesn't require user to report the spam and wait for the admins to remove it.

Smart Search History Based On a Hybrid Clustering Algorithm For Future Internet Systems

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Paper ID: CS-134

With the rapid advancement of web technology and search engines the efficiency of the web search results has been a matter of concern to every web experts. Personalised recommendation system plays a important role as it suggest the websites in accordance to the preceding preferance stored in the database. Various personalized search systems are being fabricated on the basis of various concepts such as folkosonomy data or user past history annotation but all of them do not seem to be very efficient since the prior one leads to vocabulary mismatch while the latter does not provide ample data to construct a recommendation system on that basis. In this we have proposed a personalized recommendation system and use content based filtering approach using the stemmer algorithm and the user's past history data to produce effective search results. The proposed model uses domain based inference method to improve the retrieval of the queries. The result of the proposed model can outperform the conventional personalized and non-personalized system.

Recommendation System For Travel Plan on Big Social Media

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Paper ID: CS-135

Travel planning is generally a tedious task, which consumes a lot of time and patience. This project is intended to provide travel plan recommendation for travelers to decide their destinations and itinerary effortlessly. This system will recommend travel plans based on community contributed geo-tagged photos, the image and textual descriptions available with these photos in social media websites. Social media is increasingly used for recommendation systems nowadays and travel recommendation systems usually mine Places of Interests (POI) in a region which has been popularly visited by users of social media, who share photographs which are geo-tagged or their GPS locations. Then similarities in users' destinations and routes are identified to suggest new POIs. The proposed system helps users' to obtain a personalized travel plan based on users' preferences, instead of just individual POIs. This system uses Flickr images uploaded by thousands of users for recommending the travel plans efficiently and accurately.

Removing Duplicate URLs based on URL Normalization and Query Parameter

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Paper ID: CS-152

Searching is the important requirement of the web user and results is based on crawler. Users rely on search engines to get desired information in various forms text, images, sound, Video. Search engine gives information on the basis of indexed database and this database is created by the URLs through crawler. Some URLs directly or indirectly leads to same page. Crawling and indexing similar contents URLs implies wastage of resources. Crawler gives such results because of bad crawling algorithm, poor quality Ranking algorithm or low level user experience. The challenge is to remove duplicate results, near duplicate document detection and elimination to improve the performance of any search engine. This paper proposes a Web Crawler which performs crawling in particular category to remove irrelevant URL and implements URL normalization for removing duplicate URLs within particular category. Results are analyzed on the basis of total URL Fetched, Duplicate URLs, and Query execution time.



Analysis and prediction of Adult Income

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Paper ID: CS-158

Our work aims to predict whether the income of U.S. population exceeds \$50K/yr or not based on census data provided by Census bureau database, while considering different factors such as age, work class, gender, marital status, education, race, occupation etc. using exploratory analysis and classification algorithms. The dataset contains 32561 records. The dataset encourages to draw valuable insights and conclusions. The conclusions drawn might help in delivering wiser decisions. In addition to it, suggestions could be given based on the predictions to students who are in need to pursue higher education and people who are spending less time in the workplace. We also aim to measure the accuracy of different models using Logistic Regression, Naive Bayes classifier etc. For the final output, the result of all the models will be considered.

An Integrated Technique for Image Forgery Detection Using Block and Keypoint based Feature techniques

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Paper ID: CS-161

The invention of the net has introduced the unthinkable growth and developments within the illustrious analysis fields like drugs, satellite imaging, image process, security, biometrics, and genetic science. The algorithms enforced within the twenty first century has created the human life more leisurely and secure, however the protection to the first documents belongs to the genuine person is remained as involved within the digital image process domain. a replacement study is planned during this analysis paper to discover. The key plan in the deliberate take a look at and therefore the detection of the suspected regions are detected via the adaptive non-overlapping and abnormal blocks and this method is allotted exploitation the adaptive over-segmentation algorithmic rule. The extraction of the feature points is performed by playacting the matching between every block and its options. The feature points are step by step replaced by exploitation the super pixels within the planned Forgery Region Extraction algorithm then merge the neighboring obstructs that have comparative local shading decisions into the element squares to encourage the brought together districts; at last, it applies the morphological activity to the bound together areas to ask the recognized falsification districts The planned forgery detection algorithmic rule achieves far better detection results even below numerous difficult conditions the sooner strategies all told aspects. We have analyzed the results obtained by the each SIFT and SURF and it is well-tried that the planned technique SURF is giving more satisfactory results by both subjective and objective analysis.



Attendance System using Multi-Face Recognition

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Paper ID: CS-176

Face Recognition is one of the finest security features used. In this project, the attendance in a class will be monitored by the class camera which will continuously monitor. The student's database is fed into the attendance system, and as soon as the camera recognises the face, attendance is marked for that student.

Since a class camera is being used, it will be difficult to detect faces if they are shot in different resolutions. This is done using the OpenCV module. The face will be recognised using the local histograms method.

Camera is present in the classroom where the students are seated. The camera will be taking the images of students from the video frame. A face recognition system which identifies and verifies the identity of the person from video source. Using OpenCv library it can be formulated and the matched student faces are then compared to the stored database.

Improved Query Processing in Web Search Engines Using Grey Wolf Algorithm

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Paper ID: CS-195

In Information systems working at a large scale where retrieval of information is an essential operation for example search engines etc. The users are not only concerned with the quality of results but also the time they consume for querying the data. These aspects lead to a natural tradeoff in which the approaches that lead to an increase in data have a similar larger response time and vice-versa. Hence, as the requirement for faster search query processing time along with efficient results is increasing, we need to identify other ways for increasing efficiency. This work proposes an application of the meta-heuristic algorithm called Grey Wolf Optimization (GWO) algorithm to improve Query Processing Time in Search Engines. The GWO algorithm is an alter ego of the way in which the grey wolves are organised and their hunting techniques. There are four categories of grey wolves in a single pack of grey wolves which are alpha, beta, delta, and omega respectively. They are used to work in a simulating hierarchy. These help achieve better search results at decrease query response timings.

Smart Recommendation System For Off-The Shelf Medicines

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Paper ID: CS-22

Internet usage has been at an all-time high from 2000's vintage years. The people who have access to the internet use it for numerous reasons such as social networking, marketing, promoting, enhancing businesses, consultancy, research, gaming and the list goes on. In the recent years, Review websites have flourished, where people share their opinion about a product, with an increase in response rate and reliability. Recommendations are made by mining data from review websites. Traditional Recommendation systems are limited as they only consider certain metrics, such as product purchase details, product category. Recommendation systems are yet to gain popularity in the medical field. These days most patients are unable to figure out the medication that works in healing them in the best way possible, hence they turn to review websites in order to obtain a second opinion on the prescribed medication. In this work, we have developed a smart recommendation system for off-the Shelf Medical Drugs using machine learning and data analytics based on patient feedback. The patient feedback is unstructured data which is processed using data analytic tools. After which machine learning is used to recommend the best fit and compare the drugs. In this work, we predict the impact of a drug/ medicine on the patient to whom the medication was prescribed, using data mining techniques. Firstly, we detect the user's polarity (positive/negative/neutral) based on the patient feedback for a certain drug using sentiment analysis and opinion mining following which we use machine learning algorithms to track sentiment variation and to make a recommendation based on user polarity.



Green SDN: Trends of Energy Conservation in Software Defined Network

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Paper ID: CS-58

Because of the exponential growth of the data in the Internet, storing and computing the data become a challenging issue. Therefore the data center networks are used to provide the infrastructure for storing and computing the data. Most of the network devices present in the data center network is comparatively idle for most of the time and resulting in a waste of energy. To overcome it, the Software Defined Network is proposed which allows the administrators to manage the network devices using a centralized controller and enables programmable network devices. It optimizes the utilization of network resources efficiently and results in significant amount of energy saving. There are several approaches proposed for optimizing the energy in the Software Defined Network which takes a network towards green energy and lower carbon print. This paper presents a survey on energy conservation techniques used in the software defined networks which makes the networks more capable and productive. We also provide a brief comparison of possible energy conservation techniques and guidelines for future research.



Object Detection Using Support Vector Machine and Convolutional Neural Network - A Survey

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Paper ID: CS-86

Mobile Technologies have been in trend for quite some time and with the advances in machine learning, they have become more powerful. Computer Vision, Computational Analysis and Computer Graphics have changed over the course of time. In this Project, our aim is to figure out the domains in which Machine Learning can be applied to enhance the capabilities of a Mobile Device which would lead to a better and sustainable mobile user experience. The models we would use are a convolutional neural network (CNN), support vector machine (SVM) and scale-invariant feature transform (SIFT). This project uses the real-time image from a mobile device and does the classification and detection with the help of Tensor Flow and provides the result with a confidence score.

Review on the deployment of Encryption Keys

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Paper ID: CS-100

This survey paper summarizes, categorizes and compares different types of keys and their functionality and uses. The main domain of this paper is to get a brief idea about all the encryption keys available at present. We have compared all these keys based on their respective functionality with the help of various research papers. The security of the data, the efficiency of encryption key algorithms is analyzed. With the help of this paper, a specific type of keys has their prominence in certain fields and we may come to know which keys are responsible for what and which keys we can use for different purposes.

Survey on Brain Tumor Identification

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Paper ID: CS-114

Brain tumors are caused by the growth of abnormal cells inside the Brain. Brain tumor can be classified as Benign (non cancerous) and malignant (cancerous). Malignant brain tumors usually grow rapidly when compared to benign tumors, and aggressively spread and affect the surrounding tissues. Detection of tumor in brain can turn out to be cumbersome, owing to the complex organization of the Brain. The cost of making an error in Identifying a Malignant Tumor from a Benign Tumor is too high. At a time, when cases of Brain Tumors are growing, mostly among people of age between 65 and 79, but not just confined to that age bracket, we can take advantage of the advancement in the field of technology and accurately identify tumors and help save lives.

Unmasking Fraudulent Ranking of Mobile Applications

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Paper ID: CS-121

Apps downloaded by users are mostly based on the psyche of downloading well-rounded and efficiently working apps. These performance parameters are assessed by the general users by rating these apps on a scale of 5. The top rated apps are the first to appear while searching and sorting for the desired apps. However, these ratings are being misrepresented to appear on the popularity lists to boost downloads. There is a collective nod among the users to keep these dubious deeds at check. This fraudulent representation of mobile app ratings will be discerned in this paper by detecting the leading sessions of the App at which the fraudulent ratings are depicted. Secondly, rating, ranking, and review based evidence are mined by modelling Apps' behaviours of the same using statistical hypothesis tests. Furthermore, all the evidence for the detection of the fraud is integrated by optimization based aggregation method. The efficacy and the scalability of the detection algorithm and the proposed system are validates by implementing the same on real-life data of the Apps collected from iOS App Store.

Rural Development Using Location Based Services

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Paper ID: CS-129

We are living in an era where people's life is eased by mapping services (like google maps) to a lifecycle of recommendation and reviews. Everything comes under location based services (web based) search interface taking as input as a 2D query point and while returning nearest places to want to visit (like banks, restaurant, ATM, salons) and posting check-in location online (i.e. geotagging). So, in existing system the backend database of LBS has limited access to the KNN interface. Specifically, a key limit has scalability problem. In our proposed system, we will be using K-means algorithm, which helps in adaptive space-filling and density based clustering for showcasing population of an area. This is used to map 2D pointers to ID cluster. This will help us to cover maximum area without any limit boundary. So we will use API for connecting actual online google maps. It will be helpful in acquiring information from rural areas for government to help them plan for construction and hospitality facilities in that region. The government officials can make user id of people living in rural area and register them on map through geotagging. This should be authenticated (by image or scanned fingerprint) to avoid any malicious practice. And all the users should have their address as their native place or they are residents of that place for 10 years at least. This will produce approximate result which is continuously refined during further run. This will increase the effectiveness of our algorithms and will provide effective results. Due to the real time requirements for online system, we aim to reduce computation cost by recoding repeated queries and to learn the approximate parameter in the future.

Secured Location Sharing Service by Using Clusters Algorithm for Dynamic Grid System

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Paper ID: CS-141

Mobile phones or smart phones day-to-day are becoming central computing device in our society, where survey [1] shows that there are many ways in which this can be used in sensing system. Social Networking websites also uses this data for providing many different services. Privacy has always been a major problem when it comes to sharing information as a part of people centric sensing system in location based services. Unfortunately, existing privacy-preserving techniques for location based service (LBS) have several limitations, such as requiring a trusted third party, offering limited privacy guarantees and incurring high communication calculation overhead. As a response to these issues, a number of Location-Privacy Protection Mechanisms (LPPMs) have been proposed during the last decade. Existing systems uses Link Sharing technique where the location in the form of link is sent with the help of third party system where privacy of the user is in risk.

Using Order Retrievable Encryption (ORE) [5] scheme for LBS (a) the system only requires a semi-trusted third party, responsible for carrying out simple matching operations correctly. This semi-trusted third party does not have any information about a user's location. (b) Secure snapshot and continuous location privacy is guaranteed for users (c) the communication cost for the user does not depend on the user's desired privacy level, it only depends on the number of relevant points of interest in the vicinity of the user. Hence it provides more security to the user data. In the proposed system tracking mechanism is implemented where user can get location updates from time to time and ORE scheme helps in hiding the location related information of the user from server. For searching others location k-nearest neighbour is used, which helps to get the location of the user more accurately where the computational overhead only depends upon the k value user needs which helps the users to see, how much distance they are apart from one another.



Survey on Detection of Metal Illnesses By Analysing Twitter Data

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Paper ID: CS-145

Mental illnesses are serious problems that places a burden on individuals, their families and on society in general. Although their symptoms have been known for several years, accurate and quick diagnoses remain a challenge. Inaccurate or delayed diagnoses results in increased frequency and severity of mood episodes, and reduces the benefits of treatment. In this survey paper, we review papers that leverage data from social media and design predictive models. These models utilize patterns of speech and life features of various subjects to determine the onset period of bipolar disorder. This is done by studying the patients, their behaviour, moods and sleeping patterns, and then effectively mapping these features to detect whether they are currently in a prodromal phase before a mood episode or not.

Cloud Storage Safety Against Various Pollution Threats

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Paper ID: CS-153

In the recent times the way service providers, users, clients and various authorities manage the data has changed enormously. Implementation and manipulation of data on remote storage platforms maybe service providers have numerous advantages in terms of cost cutting and various operational and maintenance costs. But still the security of data uploaded on cloud is compromised on a large scale on a local storage platform. One of the major threats to cloud data security is Pollution Attacks, where in a third party or a malicious group or an intruder attempts to manipulate or adulterate the secure cloud data. This practice also sometimes lead to a misconception that the cloud storage is secured and can't be intruded or attacked but some hackers may force these cloud providers to reveal the identity of the clients and users and might also force to expose the confidential data of an individual. To overcome such problems we propose (1) an attack detection algorithm and various procedures wherein we find and locate an attack while fetching down the data. So we come up with approach wherein every chunk of data is checked whether it has malicious content or not and then it is passed on to the server. With this approach we are able to locate the exact points or nodes where the data is attacked or polluted which should not further lead to intrusion or an serious cloud storage hack.(2)Secondly, our idea also focuses on securing the data of users and not compromising their confidentiality at any scale. So we come up with an idea of convincing file or some fake secrets of users in order to confuse the intruders whether the generated data related to a particular user is true or not. This approach has a very big advantage which is that it preserves users privacy.



A Research Study on Hand Gesture Recognition And Application For A Medium of Communication For Deaf And Dumb

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Paper ID: CS-169

This paper introduces a technique for human computer interaction using open source like python and openCV. The proposed algorithm consists of pre-processing, segmentation and feature extraction. It will use image binarization methodology for detecting the hand movements. We are designing this system as a primary level application which aims to provide assistance to the differently abled along with exploring limitless application of gesture based technologies in different fields. Traditionally pointing devices were mouse, light pens, etc. Now it has been over taken by touch screen technology. The next evolutionary technology that will take over the world will be the gesture technology. By using gestures for communicating with system, we have unlimited ways to pass different messages to the system.



Sign Language Video by Temporally Regularized Canonical Component Analysis

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Paper ID: CS-196

This application helps the tragically challenged individual to speak with whatever remains of the world utilizing communication via gestures. Correspondence assumes a critical part for people. Correspondence is dealt with as a fundamental ability. Remembering these vital words we exhibit this venture to fundamentally concentrate on helping the discourse weakened and deadened patients. Our work assists in enhancing the correspondence with the hard of hearing and unable to speak. Discourse to-sign innovation and VRS empowers capable of being heard dialect interpretation on advanced cells with marking and application has characters include in versatile without dialing number uses an innovation Hard of hearing individuals could motion gesture based communication into advanced mobile phone by utilizing VRS which would deliver capable of being heard and literary yield. Versatile motion acknowledgment may empower the hard of hearing to talk with the hearing, remotely and intermediated by a video translator. Video translator is in charge of deafing or hearing impeded people comprehend what is being said in an assortment of circumstances. The primary element of this work is that it can be utilized to learn communication via gestures and to give communication through signing interpretation of video for individuals with hearing hindrance.

Semi Supervised Image To Video Adaptation For Action Recognition

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Paper ID: CS-197

Human activity acknowledgment has been all around investigated in utilizations of PC vision. Numerous fruitful activity recognition techniques have demonstrated that activity information can be successfully gained from movement recordings or still pictures. For a similar activity, the suitable activity information gained from various kinds of media, e.g., recordings or pictures, might be connected. Be that as it may, less exertion has been made to enhance the execution of activity acknowledgment in recordings by adjusting the activity learning conveyed from pictures to recordings. A large portion of the current video activity acknowledgment strategies experience the ill effects of the issue of lacking sufficient named preparing recordings. In such cases, over-fitting would be a potential issue and the execution of activity acknowledgment is limited. In this paper, we propose an adjustment strategy to improve activity acknowledgment in recordings by adjusting information from pictures. The adjusted information is used to take in the correlated activity semantics by investigating the basic parts of both named recordings and pictures. In the mean time, we stretch out the adjustment technique to a semi-directed system which can use both named and unlabeled recordings. In this way, the over-fitting can be eased and the execution of activity acknowledgment is made strides. Analyses on open benchmark datasets and certifiable datasets demonstrate that our technique outflanks a few other cutting edge activity acknowledgment strategies.

Visual Analysis of Route Choices Based on GPS Trajectories

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Paper ID: CS-207

With the recent growth in technology and increase in volume of data, big data analytics has come out as leading avenue in almost every field. As the technology for storing and analyzing data is advancing, methods to do the same have also advanced to a new height. Stream processing is one of the potential applications of big data systems. Stream processing is used to process a continuous flow of data items to gather useful information for the user. In modern traffic networks, there are often several routes when travelling from one place to other. If we could understand the factor which influence the driver to take a certain path, then we can assist the city planners in the improvement of route usage, but also helps drivers make sensible travelling decisions. Drivers choose different routes considering different factors. The expected time cost is one example. Choosing the route with minimum time cost is what widely experienced in daily life. Some other factors may also influence route decision making, like the number of traffic lights, travelling comfortableness, etc. Meanwhile, the impact of factors may change over time. Drivers who care about the travelling comfortableness at weekends, might trade it off with travel efficiency on workdays. In this work, we provide analysis of various factor affecting the route choice of driver. We can also achieve high response rate with low maintenance cost as the model takes only the required and most recent data. The model only takes recent information into consideration and not historical data which is irrelevant in most cases.

Identification of Diseases in Plant Parts Using Image Processing

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Paper ID: CS-209

Day by day production levels in agriculture has been increasing, similarly diseases in plants also growing vigorously. Detecting damaged parts in leaves succor to develop a software which will help the farmer to get more amount of turn outs, it can blotch the diseases precisely. Therefore, it helps farmers for modern methodology at farming and also helps in good yields. Due to excrescences in trees and plants, it's hard to find them. So, collect carbon copy and process them with several algorithms which gives the best outcome. This assistance helps in geponics growth. The main purpose of the project is to help for better development in healthy farming outgrowth.

Crop Field Monitoring And Irrigation Automation

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Paper ID: CS-210

This project designs and develops real time monitoring of agriculture field by using raspberry pi and sensors. IOT Real-Time crop field monitoring and irrigation of agricultural system attracts great attention nowadays. The automation in agriculture attracts greater attention now a days. The biggest concern is depleting resource called water. Water management plays a major role in cultivation. Irrigation management system helps the farmers to save water and increase productivity of the crops. In our proposed system, we implement a smart agro monitoring system integrating sensors, raspberry pi and internet of things. Thus our proposed system provides crop field area monitoring without human intervention.



IOT Based Visualization of Weightage Based Static Task Scheduling Algorithm in Datacenter

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Paper ID: IT-05

Cloud computing has raised majorly to provide everything as a service and also for scaling the resources and utilizing the resources in an effective way. This paper aims to propose a scheduling algorithm which allocates static tasks to the resources effectively without making any tasks starve for the resources for long time. In SJF algorithm, the shortest tasks will be executed initially and the largest tasks will keep on starving for the resources to be allocated. The proposed algorithm handles such a situation effectively by adding the jobs under different weightage queues and then scheduling them in an SJF order. This gives priority to even largest job. In this paper a framework is proposed, which fetches data from Amazon SDB storage and the processing of data based on proposed algorithm occurs in a cloudsim and finally the results are visualized through an IOT mobile device. The comparison is also made for First Come First Serve (FCFS), which is a default scheduling algorithm and the proposed algorithm.



Congestion Control Framework for SDN Using Backpressure Routing

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Paper ID: CS-43

SDN is an emerging network paradigm for dynamically configuring or controlling a network device in a data network when the network is in active state. Congestion gradients are taken into consideration while dynamically routing traffic in multi hop network in Backpressure algorithm. The Backpressure algorithm works in slotted time and every slot finds path to route data in direction with maximum differential backlog among neighbouring nodes. Backpressure routing principles are used to find priority routing rules which helps in optimally stabilize a network along with that it maximizes throughput under latency. After congestion has happened in a network traffic is offloaded to nearby free node in an automated system by Backpressure algorithm. Here routing protocols are used to find the shortest path through which data need to be travel from source to destination



Towards Low Delay Edge Cloud Computing Using Hybrid Approach

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Paper ID: CS-109

In today's world, every transaction is expected to happen in a blink of an eye. This is achievable with high computation power. Such power is can only be stored in large server or data warehouses. This is where cloud computing is used. When a client makes request to the server of the application, the request which requires powerful resources are processed in servers called cloudlets. These cloudlets host many Virtual Machines to give tailor made experience to every different user and highest quality of service. To achieve all this, we will have a problem of service delay which consists of two factors namely, transmission delay and processing delay, which must be optimised to give quick responses. In ECC(Edge Cloud Computing),The nearest server is chosen based on the distance between the user and server. In this paper, we propose a method to reduce the service delay in multiple clouds using ANT colony algorithm. Transmission power delay and processing delay are reduced using hybrid techniques to optimise both the delays together.

Cloud Data Security and Authenticated Service Provision

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Paper ID: CS-124

With the advancement in technology cloud computing has been running the race in a pretty efficient manner. The cloud computing is shaping the world towards a more wireless and mobile network. With this data breach and confidentiality have also been compromised. And the attacks on the cloud based networks are increasing. The recent news has revealed that the cryptographic keys were taken by the hacker and the data was breached from the servers. There are two ways of securing the server in this case one is preventing the authentication access to the hacker and preventing the hacker to get access to the files of a data owner. The former issued has been addressed by implementation of a dual security system, where in a brute force based attack, hacker would try various permutations and combinations of passwords. Unluckily if he enters the primary security, then a secondary screen would prevent the entry of an unauthorized person. Here, the hacker needs to enter four security server names within a time frame, failing which the screen will be automatically logged off. This time frame has been set up by the data owner during the account creation. This time frame is called as the cardinality number. If by chance the attacker passes on this security authentication then there will be a second security as well. Since, the only measure after a system security has been breached, can be taken is limiting the attackers access to the data. This can be done by splitting the file into different servers and encrypting them with different keys. This will limit the attacker for getting accessed to all the files. This method will prevent attacker from getting access to the whole file at once. And the probability that the file is saved is more than the traditional system.

Loan Foreclosure Prediction: Comparing Logistic Regression and Linear State Vector Machine

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Paper ID: CS-127

A major decision for a mortgage company is to decide whether a certain loan would go into foreclosure or not. We use data science and machine learning techniques to best predict whether a loan will go into foreclosure or not. The project uses Logistic Regression and Linear SVM algorithms to predict the future of a loan. This will also provide us with an insight into the two algorithms and help us analyze the benefits and shortcomings of each and thus, provide an understanding as to which one is the better to use.

Predicting Donor's Likelihood of Donating Given Various Factors

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Paper ID: CS-131

Blood donation analysis is very critical and may even lead to life or death situations. Blood and other blood components like plasma are sometimes needed in large quantities. The requirement can be for a next week operation or even for a sudden accidental emergencies. Blood Banks fulfill most of these requirements but sometimes can have shortage of some specific and rare blood groups. To get advanced blood component, such as quarantine plasma units, RBC units etc, depends critically on various factors on which the donor is re-evaluated within a pre-established time frame. Blood and its components are required in almost all the medical purposes. Almost 18% patients die in India because they didn't receive blood on time. The donors are informed according to the need and there is a very small possibility that some might show up in specific time interval. It is necessary to predict with certainty that if a donor, in normal circumstances, will reach the donation camp in preselected time interval. The concept is simple and can predict the donors probability to donate with certainty. The previous papers started the research assuming the factors are not related. There are many factors that may be combined to form a new knowledge.



Evolution of Access Control Models for Protection of Patient Details: A Survey

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Paper ID: CS-137

Hospitals across the world are adapting to Electronic Hospital Information Systems and are moving away from the manual paper systems to provide patients efficient services. Numerous Access Control Models have been deployed for securing patient privacy one of them being Role Based Access Control Model (RBAC). The current models merely allow access on the basis of roles and role hierarchy without actually understanding the real intention of the person accessing the system. This could lead to a compromise of patient privacy and thus new methods have been evolving. In this survey we will see an evolution of the access control models which lead to the discovery of KC-RBAC (Knowledge Constrained Role Based Access Control) Model which takes into consideration the knowledge related to the medical domain along with the role to provide authorization.



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Streaming Analytics

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Paper ID: CS-142

With the development of Cloud Computing, Big data and IOT (Internet of Things); the data that is transmitted over the wire has increased exponentially, therefore, the need to handle huge quantities of data and to derive useful insights from these data has also arisen. Data can be analyzed for many purposes: it can help detect fraudulent credit card transactions in a network or help in providing constraints for machine learning by observing data patterns and concept drifts. Streaming analytics is the process of analyzing data streams while data is still on the wire; it involves understanding data patterns, classifying data, or detecting anomalies in the moving data streams. This paper describes some techniques involved in classifying moving data namely VFDT algorithm, ECM-BDF, SCALLOP, MDD algorithm and Incremental Sliding Window Analysis.



English Football Prediction using Machine Learning Classifiers

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Paper ID: CS-143

Sports Analysis and Betting have been on the rise lately with the ever increasing ease of Internet accessibility and popularity of Machine Learning. This is an interesting area of research for football, as football is regarded as much more complex and dynamic when compared to a few other sports. It is also the world's most popular sport, played in over 200 countries. Several methodologies and approaches are being taken to develop prediction systems. In this paper, we predict the match outcomes of the English Premier League, by performing a detailed study of past football matches and observing the most important attributes that are likely to decide the conclusion. We use algorithms such as Support Vector Machines, XG Boost and Logistic Regression and then select the best one to give us the target label. This model is applied on real team data and fixture results gathered from <http://www.football-data.co.uk/> for the past few seasons.

Moving Object Motion Vector Interpolation and Segmentation from High Efficiency Video Coding Bag of Words of Compressed Surveillance Video

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Paper ID: CS-155

Motion vector interpolation and segmentation of moving body is an important feature in video surveillancing. High efficiency video coding introduces new extraction features which can be further more used for moving body classification and segmentation. The first thing is the removal of motion vector outlier for preprocessing, then motion vector interpolation is used for intra-coded prediction unit. Then the blocks with cardinal (non-zero) values of motion vectors are put together into panorama regions using the algorithm know as frame join labeling. After the completion of above process the blurry region is removed from the frame using time-related consistency from the panorama region. Then the panorama region which is to be considered for process is refined by coding unit and prediction unit size. At last the classification of person or vehicle is done from the high efficiency video coding bag of words using a classifier which identifies moving body.

Crime Pattern Recognition and Prediction Using Optimised K-Means and SVM

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Paper ID: CS-156

An act done by any person which is against the laws of the particular country or region is called crime. A person who does this is called a criminal. Almost without exception, people in America think that the crimes are increasing at all-time high levels. Such worries are linked to anxiety about drugs, permissive childrearing, hedonism, declining academic standards, and the collective inability to compete with the others. In Chicago the police maintain a criminal record which is accessible to the masses. The basic idea of what things are called "crimes" is that they are thought to be things that might cause a problem for another person. In this paper, we cluster the different parameters or attributes that are available with us in the dataset. After that we use SVM to do the prediction that were can the next crime happen. The output will be in the form of clusters mapped on a boxplot and the prediction will also be on a boxplot in the form of a graph. These results will help the police departments to plan their strategies according to the results obtained and prevent further crimes happening.



Path Analysis and Confidentiality of Data Augmentation in Smart City

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Paper ID: CS-167

A smart city is a digital city in which the information and transmission technologies increases operational capability and exchanges information. Smart phone which offers advanced technologies with functionality similar as a personal computer and is the axle of all intelligent systems. Mobile devices face an array of threats that take advantage of numerous vulnerabilities and are not proficient for managing user's conscious information, hence experiencing confidentiality effluence which is mainly caused due to data augmentation. In Data augmentation the various applications of the mobile devices are responsible for acquiring the information beyond its authentic action, which is within the acceptance capacity, is emerging as one of the largest deliberate possible security threat in smart cities.



Predict Stock Prices Using Neural Networks with Historical Stock Prices: A Review

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Paper ID: CS-187

Stock markets have always intrigued researchers in industry as well as in academia. Some researchers consider stock price movements completely random. Many scholars have attempted to predict stock price using various sources of data available (like historical stock prices, news articles, twitter data, so on), by applying indigenous methods. Predicting stock prices is a regression task, many conventional techniques have been used to predict stock prices. In recent years, the neural network approach has risen to tackle the problem. The neural networks' approach has been used to predict the stock prices and stock indexes.

An Extensive Survey of Sarcasm Detection Using Various Classifiers

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Paper ID: CS-193

Sarcasm is a sophisticated form of language use that acknowledges a gap between the intended meaning and the literal meaning of the words. Sarcasm detection is the task of predicting sarcasm in text. It is a crucial step to sentiment analysis, considering pervasiveness and challenges of sarcasm in sentimental text. Sentiment is the feeling or attitude towards something and sentiment analysis is evaluating or studying about various reviews and comments given by users. This paper presents a survey on various approaches for sarcasm detection and various approaches for classification of the text. We also discuss about the types of features that are extracted from the text and how they are used for the classification using various classifiers

Methods and Approaches on Spam Review Detection for Sentiment Analysis

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Product reviews are an important source of reference for individuals in making any decisions as consumers of products and services. However, because of competition companies and their hired groups manipulate the system by posting fake reviews for promoting their own products or maligning their competitor's products. In the recent times, opinion spam detection has attracted significant attention from both the commercial groups and academic circles. However, solving the problem remains to be a challenge because of the lack of labelled resources of previously identified spam reviews which can be used for supervised learning and evaluation. Recent works by scholars have made many attempts to address this problem from the angles of reviewer and review. However, there has been little discussion about the product related review features as well as the distinctive differences between positive and deceptive opinion spams. The intention of this paper is to discuss the various approaches which have been used, to solve this problem and perform a comprehensive analysis on the subject in such a way that leads to proper understanding of the subject with a deeper insight into the methods involved. The survey goes through analysing approaches like time series patterns, statistical learning models and user behaviours implemented by scholars.



Detection of Asthma using MFCC with HMM

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Paper ID: EC-29

In this paper we are going to analyse the detection of asthma based on MFCC with HMM. Asthma disease mainly affects the vocal cord functions. The vocal cord may get affected by allergies, viral infection or vocal abuse. The patient who is suffering from asthma they can't produce the proper speech because of the vocal cord disorder. So, with the help of MFCC with HMM. We can identify by comparing the voice of normal person with asthma patient. MFCC algorithm is used for the feature extraction and HMM is used to train and match the signals.

Survey on Data Integrity for Cloud Security Using AES Algorithm

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Paper ID: CS-54

Most of the protection schemes in cloud atmosphere had not addressed the privacy conserving between third party auditor and therefore the knowledge within the cloud. The Cryptography techniques that are used antecedently were "Rivest-Shamir-Aldeman"[17](RSA) based mostly, and have totally different defects and may be overcome by exploitation the foremost powerful cryptography techniques that uses "Advanced Encryption Standards"[17](AES) cryptography algorithm. At present AES is one among foremost often used cryptography algorithm and it's conjointly supported the many substitutions, permutations and conjointly the linear transformations during the time of its execution. The practicable attack against the AES encryption does not exists up to now. Hence, AES formula still remains the popular secret writing commonplace for prime security systems. The efficiency of "Third Party Auditor"[1](TPA) is also increased using AES algorithm. In cloud users not only use the data but also update data frequently. Hence, for the cloud computing the data dynamics is also more important to maintain the security.

Monitoring of Suspicious Discussions on Online Forums Using Data Mining

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Paper ID: CS-57

With the increasing years, the internet has changed the lives of so many people for better or worse. As internet technology is progressing, many illegal activities have also increased exponentially. The Internet is an unacknowledged path for illegal activities such as hacking, trafficking, betting, fraud and scams etc. The cyber-crime branches are looking for provisions to detect these forums for illegal feedbacks, comments or reviews and download questionable postings as verification for their investigation. Our proposed system will monitor for suspicious postings, collect it from few discussion forums, implement techniques of data mining and extract meaningful data. In this concern, we focus on Data Mining and Sentimental Analysis to enhance the techniques and to extract the features of the text to represent them.

Smart Speedbreaker System Using Internet of Things

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Paper ID: CS-106

A large number of road accidents occur due to poor visibility during foggy weather, night etc. Using RF transmitter and receiver, we can warn the speeding vehicle about the presence of a speed breaker in the vicinity and automatically lower the speed. The concept of Internet of Things is used to send the location details(latitude and longitude) with the help of GPS to the cloud storage in order to prevent further accidents.

Ceaseless Traffic State Estimation with Connected Vehicles

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Paper ID: CS-123

A novel structure is made in this paper, to build the tried and true roadway development circumstance exam precision, which wires related auto movement (CVT) with artificial mental confine (AI) state of mind molding a CVT-AI technique. Development thickness is an essential pointer of exchange conditions. In this paper, the exchange operational condition is shown in putting of movement thickness. A reenacted don design of Interstate 26 in South Carolina is made to examine the coolest judgment of the technique. The supposition is that the vehicle provincially open units will forward the CV made data to the limit gadgets (e.g., roadside gadgets) for in like way preparing. CV picked up disengages ground and amount of stops, and speed insights are utilized to assess progress thickness. This paper displays that, with 20% and more fundamental CV entrance levels, the accuracy of the thickness actualities with the AI-set aside CVT isn't any underneath eighty five%. Plus, this paper exhibits that the treated CVT-AI gadget yields a superior precision with the growth of CV infiltration degrees. Level of alliance (LOS) is the marker of movement counteracts up level on roadways and is depicted with development thickness concerning pioneer auto/mile/route for a chose free stream speed. LOS surveyed utilizing the CVT-AI thickness estimation strategy is disengaged and the thickness estimation figuring utilized by the Caltrans Performance Measurement System (PeMS), which is based at the inhabitation and flow data collected through the street inductive circle pioneers. With a 10% or additional CV assault, higher accuracy is talented the use of the CVT-AI depends detached and the PeMS thickness estimation checks.

An Expert System on Poker to Increase the Profit of a Hand Using Data Mining Algorithms

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Paper ID: CS-133

Developing an expert system that makes decision in poker is considered to be challenge to the A.I. researches, due to its incomplete information and random nature. In this project we take Texas No Limit Hold'em Poker's previous games data as the dataset and implement machine learning and data mining techniques to analyze them to create a model and make decisions based on them. First the dataset is created by logging all kinds of game data that results as a factor of game changer or winning the game or increase in profit. Then we move to the process of creating models. The process through we create the model is called Training. In machine learning the goal of training is to create an accurate model that helps us take a decision based on the previous set of data. Then the process of evaluation, where we predict the kind of decision to be taken based on the results of various algorithms implemented.

Inter-Relationship between Twitter Data for Restaurant Recommendation System

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Paper ID: CS-139

With the recent advancements in technology and rapidly growing data, big data systems have emerged a fast- growing sector in almost every field. As the technology for storing, utilizing and analyzing data is advancing, methods to do the same have also advanced to a whole new level. Stream processing is one of the potential applications of big data systems. Stream processing is used to process a continuous flow of data items to gather useful information for the user. Restaurant rating systems are some applications of this method. In this way, this application can be used to provide help to solve end-to-end real-life problems. On this basis, the presented work aims to analyze, the inter-relationship between data related to restaurant information from a different perspective. The proposed work will also help in analyzing patterns in stream processing which can prove to be useful in finding the users requirements, preferences etc. related to restaurants and only taking the most recent data in the account. In this paper, we are analyzing Twitter data by using Hadoop tool along with Hadoop distributed file system (HDFS), MapReduce [4] and hive. The advantage of using this system is that by using these tools we can process the data with no limitation of data and no data loss problems. Also, we can get high throughput with low maintenance cost as the model takes only the required and most recent data. The main motivation for building this model is that it takes only the recent information into consideration and not historical data which is irrelevant in most cases.



Facial Expression Recognition in Video with Multiple Feature Fusion

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Paper ID: CS-154

To pass on feelings and transmit messages Outward appearance assumes an imperative part for people. Be that as it may, outward appearances caused by facial muscle developments are inconspicuous and transient is a troublesome undertaking. The efficiency of the current work is approximately 40-50%. Using HOG-TOP and geometric features for feature extraction along with pre-processing techniques, better saliency algorithm and occlusion handling can increase its efficiency. In this paper we use HOG-TOP and geometric features to extract from the frames which are first published by Junkai Chen and Zhengai Chen in IEEE 2017 which showed better efficiency. In addition to that We propose to use the pre-processing techniques and Occlusion handling to improve the existing work in terms of efficiency. Using viola-jones algorithm we can improve the speed and efficiency of detection of the face.



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TRYON

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Paper ID: CS-165

The aim of our project is to extract important features from image data using edge detection algorithm, from which description, interpretation or understanding of the scene can be provided by the machine. Image processing can be defined as, the processing or altering an existing image in a desired manner. It is in its general form pertains to the alteration and analysis of pictorial information. This project is based on Image Processing and Augmented Reality. Tangibility is core at the physical retail experience. In this the user inputted image is processed and by that you can check whether the clothes suites on you, does it look perfect on you? Does it matches with your complexion? This application helps both the sellers and buyers in today's e-market, by this goods return can be avoided at certain extent. It brings a revolutionary change in the market, it helps to support the online marketing and also enhances the sales of the seller.

A Proficient DDOS Overflow Attack Discovery and Avoidance Scheme

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Paper ID: CS-172

In today's world of internet, many security problems are faced by the users. With the continuous growth of the internet and the size of the network, a large number of users get connected with the network. As a result, there arises a need of security. Unauthorized personnel always try to get access to resources that are restricted and in order to prevent such vulnerabilities, there arises a need for intrusion detection and prevention systems. IDS or IPS may be defined as systems that are used to detect and prevent attacks by malicious users. With the increase in size and quantity, it has become very difficult even for internet prevention systems to detect the vulnerabilities. For them to give satisfactory results they have to be placed very close to the client. The problems faced by the internet prevention systems can be solved by gathering the network packets and analyzing the network flow information at real time. Network Anomaly Detection Algorithm (NADA) may be defined as an algorithm which analyzes the network traffic to detect the abnormalities. It can be used to detect flood attacks in which a single user sends multiple requests to prevent the server from working as required. The most common belief in the domain of cyber security is that all the network attacks follow the principles of poisson process. Various aspects of DDOS attacks have been discussed in the paper.

Cloud Based De-noising for Privacy from External Cloud Databases

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Paper ID: CS-190

In modern time there is a huge increase in digital multimedia popularity, such as videos and images. With the increase in data huge and the requirement for sensitivity of data security the phenomenon of cloud computing has widely been adopted. There have been many traditional and new advance techniques adopted to provide us with the optimum working needs. These allow us to store image-based multimedia directly on top of encrypted databases with better and safer than previously used traditional techniques. In this paper, we will be introducing a new definition for security for such privacy retrieval scenarios and present similar proposed schemes that are secure under these terms.



Efficient Youtube Mining and Data Analysis Using Hadoop

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Paper ID: CS-200

Analysis of organized information has seen huge achievement before. However, analysis of large scale unstructured information as video format remains a testing region. YouTube, a Google organization, has over a billion clients and creates billions of views. Since YouTube information is getting made in an extremely colossal sum and with a similarly extraordinary speed, there is an enormous request to store, process and painstakingly ponder this large amount of information to make it usable. The principle goal of this project is to show by utilizing Hadoop ideas, how information created from YouTube can be mined and used to make focused on, continuous and educated choices. This project utilizes SQL like inquiries that are later keep running on Big Data utilizing HIVE to extricate the important yield which can be utilized by the administration for analysis.

A Review of Classification Algorithms Used for Gesture Recognition Using Accelerometer (2018)

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Paper ID: CS-201

Gesture recognition has the potent and capacity to be a natural means of interaction with PCs and can also prove to be a powerful tool in the domain of communication between the humans and the computers. A disparate range of algorithms are available in the areas of data mining, machine learning, gesture and pattern recognition for solving the same kind of problem. But there is a little guidance for suggesting which algorithm to use which gives best results for the problem at hand. Classification plays a vital role in many information administration and retrieval tasks. Document classification, also known as document categorisation, is the process of assigning a class to one or more predefined category labels. Classification is often posed as a supervised learning problem in which a set of labeled data is used to train a classifier which can be applied to label future examples [1]. Gesture classification includes different parts such as data processing, feature extraction, feature vector construction and final classification. Thus improvement in each part should lead to better results in document classification. In this paper, we apply machine learning methods for gesture recognition using classification techniques and algorithms available. The aim is to train our classifier by support vector machine (SVM) and K-nearest neighbour (KNN) algorithms. We aim to propose a framework for an accelerometer based gesture recognition of 26 letters of the english alphabet, all established and collected by means of a sensor placed on the palm of a person used as a device. Using machine learning the results achieved are recognitions made by 50 gestures, using the support vector machine classification methods with a performance of 0.94 accuracy. In Experiments, although both algorithms show acceptable results for gesture recognition, the performance of SVM is better in comparison to KNN.



Improving Optical Character Recognition Techniques: A Survey

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Paper ID: CS-110

Document text recognition uses a concept called OCR (optical character recognition), which is the recognition of printed or written text characters by a computer. This involves scanning a document containing text, and converting character by character to their digital form. Thus, it is defined as the process of digitizing a document image into its constituent characters. Equipments used to obtain clearer images for analysis are cameras and flatbed scanners. Even though it's been out in the world since 1870, the OCR technology is yet to reach perfection. This demanding nature of Optical Character Recognition has made various researchers, industries and technology enthusiasts to divulge their attention to this field. In recent times one can notice a significant increase in the number of research organizations investing their time and effort in this field. In this research, the progress, different aspects and various issues revolving in this field have been summarized. The aim is to present a scrupulous overview of various proposals, advancements and discussions aimed at resolving various problems that arise in traditional OCR.

A Biomedical Communication using Human Body as a Communication Channel

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Paper ID: CS-163

Human body communication has proven to be an efficient mode of communication for field body sensor network applications and the human body used as a propagation medium. It is short-range wireless communication in the vicinity of inside a human body. Human body communication provides physical layer for wireless body area networks in healthcare and medical applications. It is divided into two solutions, galvanic coupling and capacitive coupling. Formerly its requires one pair electrodes using in both the transmitter (TX) and the receiver (RX) side and now its requires a single electrode for the TX and the RX. The most useful capacitive coupling makes it possible to miniaturize the size of the device and the applications requiring the devices to be miniature enough. Since its transferring high data rates while maintaining low power consumption, and provide high security and easy integration within body-worn devices, it shows great potential for wearable devices. The proportion of biological tissues such as muscle, fat, and skeleton are different between individuals, the overall electric constants of human body are diverse, as well as the signal propagated through human body. The divers can be utilized as the biometric trait to authenticate individuals that mean here employing consider as both the authentication and the communication approaches because of which employs impulse radio type and technology for transmitting vital signals on the human body.

Moving Object Detection and Lane Positioning in Advanced Intelligent Transport System

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Paper ID: CS-164

In this paper, we deal with detection of objects and obstacles for intelligent vehicles using image processing within lanes thereby obtaining a more precise detection of objects that enables the intelligent systems to help reduce collisions and reduce the harm caused to others on the road. In order to detect these dynamic objects in the dynamic driving environment image processing combined with lane detection algorithm and certain other algorithms for reducing noise and residue in segmented frames. Which can be processed to detect objects in the captured image by the vehicle module by comparison of the processed image with the Coco database. This paper intends to assist the intelligent systems for improved road safety through better advanced intelligent transport systems by providing these prerequisites for emergency response actions that help in evasive measures when required. The goal of this paper is to recognize the objects and estimate the distance of identified entities in the analyzed image using dataflow library systems. The presented idea is to demonstrate potential of our proposed system for enhancing the driving scenario in dynamic road environments with better AITS and improved road safety.



Performance Analysis of Jitter and Throughput in Software Defined Network

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Paper ID: CS-184

The expectation has evolved significantly over the past few years as users and endpoints use the network in ever evolving ways and increasingly expect guaranteed low latency bandwidth. The new emerging approach to the world of communication networking is the Software Defined Networking(SDN). In SDN network control functionality is decoupled from the data forwarding functionality of networking device, which enables service provider to shape the network's traffic and manage the QoS application's wise dynamically. SDN concept was already proven to manage the real time applications(VoIP, Video Conferencing, etc.) effectively. Voice over Internet Protocol(VoIP)is phone and multimedia service over internet. In this paper we present the analysis of TCP and UDP throughput and measurement of the jitter for various length of UDP packets in a SDN environment.

A Survey on Automatic Music Generation

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Paper ID: CS-203

Just like you should not watch a foreign language movie without its subtitles , identically you should not listen to music without its lyrics . Music lyrics are words that combine to produce a song in harmony. Usually the music lyrics that we normally listen to are human written and no machine involvement is present. Writing music has never been a easy task, lot of challenges are involved in this because the music lyrics need to be meaningful and at the same time it needs to be in harmony and sync with the music being played over it . They are written by great artist who have been writing music lyrics for years. This project tries to automate the process of music lyrics generation using computer program which we produce lyrics and reduce the burden on human skills and can generate new music lyrics and a very faster rate than humans ever can. This project also aims toward the merge of human and artificial intelligence.

IOT Based Smart Home with Authorization through Image Processing

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Paper ID: CS-213

With the arrival of Internet of things (IOT), it is evident to change society in a better way, but also faces security issues in safety. This paper explains the importance of monitoring of smart homes on the internet and defines various security issues associated with it. This paper aims at designing a basic home automation system which can be functioned from anywhere through data collected on the web server. Image scanning of the faces of the people who would want to enter into the home is done so as to improve security. Encryption is provided so as to maintain the privacy of the generated data.



Cross-Platform Development: Challenges and Opportunities

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Paper ID: CS-75

We, here investigate the different challenges with the native application and opportunities with the cross-platform application and which is an efficient method of building the same. The popular use of various operating systems like Windows, Mac, Linux, and Android applications in these sectors are getting more significance than ever. Since each of these platforms requires different types of programming knowledge, developers need to spend much time and cost to build an app for separate platforms. So, in order to mitigate these problems, the web-based solution can be used. Cross-platform development is useful because the user can write their code in one language that can easily be compiled to multiple platforms, i.e. platform independence can be achieved. In this case, we build an Auto Server Configuration tool, where we can connect to the server by SSH and configure it using cross-platform client software. Client Software would be able to run commands on the server for performing certain configuration and tasks. We introduce approaches in the field of cross-platform app development using Electron framework. A solution to build applications for multi-platforms by using Electron framework which uses various web technologies have been proposed. Thus time and cost of developers will be reduced.



A Survey on Student Performance Prediction

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Paper ID: CS-140

In today's world, the academic performance of students is necessary for the development of students. Prediction of students' grades helps in finding out about the various academic opportunities that are in store for them. It helps in giving better future prospects for them and opening a plethora of opportunities for them. It will also help in choosing the better career option for the students. And thus, it helps a lot if the performance of the students can be predicted before time so that the educational institutions have a clear idea of which set of students might need assistance and which set of students will perform well. In this model, it will mostly be focused on predicting the performance of the students in school based on their subject marks. Taking all these parameters into account, a model will be designed to predict the performance of each student and if he needs further assistance or not. And in order to achieve this, we will be making use of multiple regression for the prediction of student performance.

A Survey on Human Intention Classification Using Self-Relevant Sentences on BCI Technology

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Paper ID: CS-144

The Brain Computer Interface (BCI) technology is to make sure machines and humans interact and communicate with higher degree of accuracy. In this process, machines will tend to understand human intentions to a large extent in the future. Even if there is no explicit expression or movement or body gesture, the machines will tend to understand the implicit expression. For this clarity, a self-relevant sentence was read by the subject and then the ElectroEncephaloGraphic (EEG) data was collected. Based on the sentence read, there will be three different implicit classifications with associated indicators as 'fully-true', 'Not-true' and 'Partly true'. Subjects were asked to take a decision after the entire sentence was shown. Since each sentence is split up into two parts viz-sentence body and sentence end, it is found that human intention was found while seeing the contents whereas decision was made just before the end of the sentence. The final answer out of the above three was obtained at the end of the sentence reading and decision. The area of focus is the frontocentral area of the brain. According to the Morlet wavelet transforms along with the time-frequency representation, a visible distinction in gamma, beta and alpha signal at frontocentral area and theta signal at centroparietal area have been observed. Many classifiers are available, but Support Vector Machine (SVM) has been found as the best classifier.

An Augmented Approach of Stream Ciphers in Cryptosystem for an Arbitrary Tradeoffs Attacks

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Paper ID: CS-151

Initially a general technique for breaking arbitrary block ciphers with N possible keys in time T and memory M given by the tradeoff curve ($TM^2=N^2$) for the condition $1 \leq T \leq N$ was introduced by Hellman. Later Babbage and Golic proposed that a different $TM = N$ tradeoff attack was possible for the condition $1 \leq T \leq D$ applicable to stream ciphers, where D is the amount of output data available to the attacker. In this paper a combination of the two tradeoff attacks has an improved time/memory/data tradeoff for stream ciphers of the form ($TM^2D^2=N^2$) for any $D^2 \leq T \leq N$ is depicted. Also the effect of stream ciphers with low sampling resistance is shown which has tradeoff attacks with fewer numbers of lookup tables and a wider choice of parameters.



Weather Prediction for Indian location using Machine learning

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Paper ID: CS-162

In this project work I am going to develop a system to predict various weather conditions across Indian subcontinent using Data Analysis and Machine learning techniques such as linear regression and/or logistic regression. The main source of data to be used for supervised learning is to be collected from data.gov.in, ncdc.noaa.gov and UCI machine learning data repository.

A Survey of Algorithms Used for The Prevention of Fake Profiles in Social Networks

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Paper ID: CS-182

A great many dynamic clients all around the globe are utilizing on the web informal community, for example, Facebook, Twitter, Tumbler and LinkedIn. These shortcomings make it easy to abuse client's data and do personality cloning assault to frame counterfeit profile. In this proposed framework, information concealing systems to shroud some data in profile pictures with a specific end goal to identify botnets and counterfeit profiles. This venture introduces an order and examination of discovery instruments of clone attacks on online interpersonal organization, in light of trait similitude, companion arrange closeness, and profile investigation for a period interim and record of Internet Protocol groupings. In this task we have proposed discrete wavelet change calculation for information covering up. In this manner this would keep the clone assaults and giving complete client information protection saving. Likewise when clients transfer the profile pictures they can be watermarked and refreshed. For the watermarking method Java static watermark can be used. Any phony clients refreshing a similar profile picture can be distinguished and their separate IP would be followed and blocked. Likewise for secure picture transmission, we utilized Discrete Wavelet Transform (DWT) for information concealing/steganography and Discrete Cosine Transform (DCT) for picture pressure.

Data Sharing Strategy in Cloud Computing Using Attribute Based Encryption

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In today's world, storing and sharing data online is becoming common on trusted third party servers known as Cloud Servers. Users accessing and sharing their secret data possess a certain risks of getting their information leaked by some third party authority. In order to keep the data integrity and confidentiality, many cryptographic algorithms are implemented to address the issue . In Health Care System, patients and doctors share their important details to the hospital management by storing it on the online on the Cloud (internet) system. Important health details such as Blood Group, disease, etc. can be accessed by unauthorised users. Key Escrow is one of the main issues in data sharing over the cloud servers, since the third party key authority can also misuse their benefits . In our paper, we propose an improved two party key issuing method that neither key authority nor cloud service provider can access the secret key of the client. Both capacity costs and encryption quality for a cipher text are minimised. With the implementation of Attribute based encryption in cloud computing, we are able achieve secure and efficient data sharing in Health Care System.

Prevention of Blackhole Attack using Reactive Propagation Mitigation AOMDV

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Due to the rapid development of wireless sensor devices in terms of low power and inexpensive data relaying has been partially achieved. Due to this, the wireless sensor devices are able to gather information, process them if required and send them to the next sensor device. The resource constrained ad hoc wireless sensor network is versatile yet vulnerable to attacks. The communication infrastructure with less sensor networks may interact with the sensitive data in the hostile environment where the nodes may fail and new nodes may join the network, which may leads to the susceptibility to many kinds of security attacks. An adversary can eavesdrop on all the messages within the emission area, by operating in promiscuous mode. So, it is imperative that the protection of the network routing from the adversaries for the wireless ad hoc sensor network must be adopted for critical missions. The wormhole attack made by the malicious attacker in sensor networks has been implemented and also the number of Guard nodes required has been decided and implemented. Functions of the guard nodes like local inter-node collaborative data fusion and decision fusion to detect, isolate and prevent any further attacks is to be implemented.



Prevention of Insider Attacks Using Hybrid Approach

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The main objective of this paper is to tell about the impact of internal attacks or breaches within an organization. One of the major reasons of data breaches is malicious insiders who have the access rights knowledge of data values and technical know-how of escalating their privileges in launching such insider attacks. There are many privileges given to the employees by the organization but liberty comes with a responsibility and that responsibility seems to be missing in many case studies found for larger organizations. The employees of the organization have been leaking sensitive information which have brought huge amount of loss for the company. Several measures to detect such insider attacks have been discussed and various models for the same have been taken into account in order to bring out the gravity of the topic. This paper discusses several measures which can be used to prevent and safeguard sensitive data and resources applicable to both enterprises as well as government agencies.



Intrusion Detection to prevent System from Botnet

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Botnet attacks were disrupted by focusing on the command-and-control source. We also identify the performance bottleneck of our system and optimize its scalability. We introduce a novel two-stage approach for the important cyber-security problem of detecting the presence of a botnet and identifying the compromised nodes (the bots), ideally before the botnet becomes active. In our project, we presented a coarse grained botnet detection system that is able to identify stealthy P2P botnets, whose malicious activities may not be observable. It is used to determine the geographical location of website visitors based on the IP addresses for applications such as fraud detection. We can find the IP address of the attacker.

Home Automation Using Smart Cube

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Now a days managing all the devices in a Smarter way in our homes is becoming an exigency. We need something simple and intuitive to use. Smart Cube could be a solution: it's a portable device that contains an Arduino board and some sensors that communicate with the appliances and the actuators in your Smart Home. Which in turn acts as a HOME AUTOMATION? In this fast placed life of 21st century, automation plays a key role in human life. Home automation allows us to control household electrical appliances like light, door, fan, AC etc. It also provides home security and emergency system to be activated. Home automation not only refers to reduce human efforts but also energy efficiency and time saving. The main objective of home automation and security is to help handicapped and old aged people who will enable them to control home appliances and alert them in critical situations. This project put forwards the implementation of home automation and security system using Arduino microprocessor and Android Smartphone. Home appliances are connected to the microprocessor and communication is established between the Arduino and Android mobile device or tablet via Bluetooth module. We would develop an authentication to the system for authorized person to access home appliances. The device with low cost and scalable to less modification to the core is much important. It presents the design and implementation of automation system that can monitor and control home appliances via android phone or tablet. We are using a smart cube which will control the home automation. In each face it will control the one application in it And we are using smart phone.

A Game-Theoretic Examination of Confrontational Organization

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Assault discovery is generally drawn closer as an arrangement issue. In any case, standard characterization devices frequently perform ineffectively in light of the fact that a versatile assailant can shape his assaults in light of the calculation. This has prompted the current enthusiasm for creating strategies for antagonistic grouping, yet to the best of our insight, there have been not very many earlier thinks about that consider the aggressor's tradeoff between adjusting to the classifier being utilized against him with his longing to keep up the adequacy of his assault. Counting this impact is vital to infer arrangements that perform well practically speaking. In this examination we demonstrate the collaboration as an amusement between a protector who picks a classifier to recognize amongst assaults and ordinary conduct in view of an arrangement of watched highlights and an assailant who picks his assault highlights (class 1 information). Ordinary conduct (class 0 information) is irregular and exogenous. The assailant's target adjusts the advantage from assaults and the cost of being recognized while the guard's target adjusts the advantage of right assault identification and the cost of false alert. We give an effective calculation to figure all Nash equilibrium what's more, a reduced portrayal of the conceivable types of a Nash balance that uncovers natural messages on the most proficient method to perform arrangement within the sight of an assailant. We likewise investigate subjectively and quantitatively the effect of the non-aggressor what's more, hidden parameters on the harmony systems.

Multiple Route Choices Based on General GPS Trajectories Analyzed Visually

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There are frequently more than one routes between areas. Drivers select one-of-a-kind routes with distinct issues. Such considerations, have always been a factor of hobby in the transportation area. Research of course desire behaviour are generally primarily based on small range experiments with a collection of volunteers. However, the test facts is pretty restrained in its spatial and temporal scale as properly as the practical reliability. In this work, we discover the possibility of reading direction preference behaviour primarily based on standard trajectory statistics-set, that is more realistic in a much wider scale. We broaden a visible analytic gadget to help customers handle the huge-scale trajectory facts, evaluate distinct direction picks, and discover the underlying motives. Particularly, the device consists of: 1. The interactive trajectory filtering which supports graphical trajectory question; 2. The spatial view which offers a top level view of all feasible routes extracted from filtered trajectories; 3. The aspect visualizations which provide the exploration and hypothesis production of different factors' impact on route choice behaviour, and the verification with an integrated path desire version. Applying to actual taxi GPS dataset, we document the system's performance and demonstrate its effectiveness with 3 cases.

Survey of Augmented Reality and Interaction using Gestures

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Augmented Reality provides additional or augmenting information about or with the physical environment perceived by the user. This helps the user to perceive the world better and perform any task on-the-go. Thus, adhering to the principles of Human Computer Interaction (HCI), user interfaces become more interactive and reduce the need for any additional components.

A Survey of Several Load Balancing Techniques and Algorithms in Cloud Environment

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Cloud computing is an upcoming technology which is used mainly for parallel computing and large scale distributed computing. This concept provides various techniques like shared resources, software packages, information and other resources as per requirements of clients at specific time. The concept resource sharing is a technique that distributes dynamic local workload across all the nodes. Cloud computing is rapidly growing technology and more users are attracted towards utility computing, better service needs to be provided. For better management of the workload at all the nodes, load balancing techniques are used, so the load balancing plays a crucial role in cloud computing. Here in this paper we are discussed various load balancing techniques which will solve the major issues in cloud.

Router Based Detection for Low-Rate Agents of DDoS Attack and Flood attacks using TCP In Cloud environment

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Despite the fact that the amount of cloud occupations has essentially extended over the span of the most recent couple of decades, guaranteeing the accessibility and security of employment information, assets and administrations is as yet a basic and testing research issue. Foreswearing of administration assaults are the most run of the mill cybercrime strikes after information burglary. DDoS Transmission Control Convention surge assaults can deplete the cloud's sources, devour the greater part of its transfer speed, and mischief an entire cloud venture inside a short timeframe. The opportune discovery and aversion of assaults in cloud occupations are among these lines essential, particularly for eHealth mists.

In here we display a fresh out of the plastic new classifier framework for finding and averting DDoS Transmission Control Convention surge assaults out in the open mists. The anticipated CS' DDoS framework gives an answer for obtaining put away records by grouping the approaching bundles and settling on a choice in the order comes about. All through the location organize, the CS'DDOS decides whether a parcel is conventional or a or on the other hand emerges from an aggressor. All through the anticipation stage, bundles that are ordered as malignant will be denied access to the cloud bolster and the source IP address will be boycotted. The task of the CS'DDoS framework is differentiated using the different classifiers of the slightest squares bolster vector machine, naï, ve Bayes, nearest to K and a multilayer perceptron. The outcomes demonstrate that CS'DDoS yields the best execution when the LS SVM classifier is received.

IoT Based Smart Field Monitoring System with Disease Identification

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Farming is spine of a nation. Uncommonly in a nation like India, where lion's share of population depends on it. Besides, when Farming influences a major portion of economy, it gets to be basically critical to create more productive procedures for farming related exercises. These days, most of the frameworks utilized for this are physically worked one. Here, IOT comes into picture to supply semi-automated or fully-automated frameworks to supply superior comes about. The survey includes several automated Irrigation and Diseases Detection techniques, which are proposed recently.

Voice Based Public Opinion Mining and Automatic Category Identification

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Today in current scenario, these two governments central and state provide good Beneficial schemes for people with the high budget. After some months there is the schemes are not beneficial to the public and no maintenance been carried. Everyday people have to face many problems in our life but no one knows which government to take the responsible for that problems. And also, most people don't find time to raise their problems into the government and another one reason is most people find difficult how to approach them to solve these problems. So that the public and government negligence several problems have not been solved .

Conservation of Cloud Storage Security Using Hybrid Algorithm

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Paper ID: CS-232

In this era the quantum of data that are processed are immeasurable. Hence storing this vast amount information in cloud leads to immense security issues. In existing system the security of the system compromised by using linear coding algorithm which affects the data that has been sent through intermediate routers and results in modification of data or data lost. Hence to provide a high security to information in cloud computing, single algorithmic program are not enough. Use of one algorithmic program is not effective for top level security to information in cloud computing. In this paper, we have introduced new security mechanism using interchangeable key cryptography rule. In this methodology, AES and Triple DES algorithms are accustomed give block wise security to information rather than network coding which causes pollution in the code words of the received packets and results in pollutant attack. All algorithmic program key size is 128 bit. The choice of algorithmic programme can occur rely upon the method temporal order. Before applying the rule the data are split into eight components and therefore the numbers are generated indiscriminately according to the time. Within the output size the decipherment method can occur at the same time. The user must apply decipherment key so as to decipher the information on downloading the data. To check the integrity and authenticity of the data that has been stored in the cloud we also use Third party audit. They are also restricted to only view the certain keywords that are allowed by the user.

Hybrid Task Scheduling Algorithm For High Availability in Cloud

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Paper ID: IT-11

Cloud Computing is a novel technology that emerged at the end of the last decade, and it is a trending topic even now. This includes the minimizing infrastructure cost, and the elasticity property, that allows services to be scaled according to the demand. With increased use of cloud computing architectures, many are trying to reduce the power consumed by unutilized resources. Availability of cloud service providers are a major concern for many cloud service providers. Availability can be discussed in 2 major aspects a) Load balancing b) disaster recovery . Load Balancing helps in reducing energy consumption by distributing the load evenly and reduced resource consumption. The load of host are not distributed uniformly that's why some host loaded heavily and some have very less user process to execute. We intend to use Network load balancing user process on VM of the host based on utilization thresholds. Server clustering will help in reducing the time taken for the request to process. Disaster Recovery is done by replicating the data present in the model in multiple places. Hence the model will provide not only good and efficient load balancing but also provide a good disaster recovery system. Standardization of the load balancer will be done using data analytics which will monitor the traffic through the balancer, counters for packets, bytes, connection attempts, and outbound connections.



Securing Data on Cloud Using Ciphertext Attribute Based Encryption

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Cloud computing is one of the fastest growing technologies in the modern world . With the advent of cloud companies are outsourcing their data and services to the cloud . Security and privacy still remains the core interest in cloud based companies . Public clouds are managed by the service providers which includes storage , networking and data center operations ,servers etc. Ensuring security and privacy to the data is the still the most important issue in the cloud storage , even though many efforts have been taken to solve this issue . This project presents a survey on the previous techniques like Attribute based Encryption (ABE) , Public key cryptography , Ciphertext Policy Attribute based Encryption (CP ABE) and gives the idea File Hierarchy CPABE (FH CP ABE) . CP ABE generally doesn't have the characteristics of multilevel hierarchy but this technique supports the multilevel hierarchy of the shared files . All the layered files are being integrated and encrypted with the access structure so that it will be easy for the data owners to decrypt the file . Thus this technique helps us to save ciphertext storage and the cost at the time of encryption . The performance analysis and the security proof show that the proposed scheme is able to achieve efficient and secure data sharing in cloud computing.

Ranking News Based on Social Media and News Channel Sources Using Social Media Factors

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News media channel gives us information about the things and events happening all over the world. In present time, social media services like Twitter give a massive quantity of user-generated information. Now in order to use these resources we need to find some way to filter out the noise so that only the useful content is left which will be based on news media and will be valuable. However, even when we eliminate the noise, info overload should exist within the remaining data—hence, it's a good idea and will be helpful if we rate the data empirically. To realize prioritization, information should be graded so as of calculable importance considering 3 major elements. First, how many days the topic was in news media, and may be thought-about the media focus (MF) of a subject. Second, amount of time the topic was talked about and was active in social media tells about its user attention (UA). Finally, the users of social media who discusses the topic by using tweets, hashtags or replies may be thought to be the user interaction (UI) toward the subject. We came up with an unsupervised framework that identifies news topics dominating in both social media and also the mass media, then ranks them by the degrees of three elements - Media Focus(MF), User Attention(UA) & User Interaction(UI).



Multinetwork Security and Vulnerabilities for Web Based Platforms

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Paper ID: CS-225

Vulnerabilities in web based platforms have increased significantly over past few years. As the umbrella of web auth is increasing and being developed a number of studies have been done to address the solutions. A detailed analysis needs to be done to find a new approach towards finding a new solution. Our aim is to provide practical approach in how to exploit the existing vulnerabilities in the web application development and we can fix those vulnerabilities making our application robust and full secure from attackers. In order to do that we actually demonstrate the attack and provide the fix for those vulnerabilities using two web applications.

