Kristu Jayanti College
AUTONOMOUS Bengaluru
Reaccredited 'A' Grade by NAAC | Affiliated to Bangalore University

NCCI' 17

NATIONAL CONFERENCE

ON

COMPUTATIONAL INTELLIGENCE

SEPTEMBER 15, 2017

Organized by

Department of Computer Science (UG)

In Association With

ICT ACADEMY

Kristu Jayanti College

AUTONOMOUS Bengaluru

Reaccredited 'A' Grade by NAAC | Affiliated to Bangalore University

Report on

National Conference on Computational Intelligence-2017

In Association with

ICT Academy

15 September 2017

Organized by

Department of Computer Science

CONTENTS

Brochure

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HOW TO REACH

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Bus Route - 292B, 292C
From KR Market : Bus Route - 292, 292D, 293C
From Vasanth Nagar / Cantonment Station / Bangalore East Station : Bus Route - 292, 292B, 292C
Nearest Railway Station : Bangalore East (8 Kms)/ Bangalore Cantonment (10Kms)
By Air : Kempegowda International Airport (28 Kms)

ADDRESS FOR COMMUNICATION

Convener – NCCI-2017,
Department of Computer Science(UG),
Kristu Jayanti College (Autonomous),
K. Narayanapura, Kothanur P.O,
Bangalore-560077,Karnataka

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NATIONAL CONFERENCE

ON

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ABOUT THE COLLEGE

Kristu Jayanti College, founded in 1999, is run by "BODHI NIKETAN TRUST", formed by the members of St. Joseph Province of the Carmelites of Mary Immaculate (CMI). The college is affiliated to Bangalore University and is reaccredited with highest grade 'A' by NAAC during the second cycle of accreditation. The college is recognized by UGC under the category 2(f) & 12(b). The college was accorded autonomous status in the year 2013 by the University Grants Commission, Government of Karnataka & the Bangalore University. In India Today - Nielsen survey 2017 the college is ranked 2nd Best BCA College, 9th Best Commerce College, 17th Best Science College & 14th Best Arts College in India and 2nd,3rd,4th positions in Arts, Commerce & Science among **Top 10** Colleges in Bangalore.

The institution strives to fulfill its mission to provide educational opportunities to all aspiring youth to excel in life by developing academic excellence, fostering values, creating civic responsibility and building global competencies in a dynamic environment.

ABOUT THE DEPARTMENT

The Department of Computer Science was started in 1999 as the first Department in the institution. The Department offers Bachelor of Computer Applications (BCA) and Bachelor of Science in Computer Science, Mathematics, Electronics (CSME) and Statistics (CSMS). In India Today - Nielsen Survey-2017, the college is ranked **2nd Best BCA College** in India. The Department believes in continuous knowledge and Skill enhancement by encouraging participation in conferences, seminars, workshops, publications, research articles, organizing value added, certificate and bridge courses, and Inter and Intra Collegiate fists. The academic alliances of the department with IT giants to offer industry curriculum is a special feature of the department.

CONFERENCE PREAMBLE

Computational Intelligence (CI) is an offshoot of an Artificial Intelligence. It proposes a set of methodologies and approaches to address complex real world problems by designing effective intelligent agents. The conference is meant to discuss the state-of-the-art developments, challenges and unsolved open problems in the field of CI. The conference promotes all aspects of computational intelligence theory, algorithm design, applications, and related emerging techniques.

The National Conference on Computational Intelligence (NCCI-2017) will bring together leading researchers, engineers and scientists in the domain of interest accross the country by providing a platform to present new advances and research outcomes in the field of Computational Intelligence.

CALL FOR PAPERS

Subthemes for the Conference include, but are not limited to the following

- Machine Learning
- Neural Networks
- Fuzzy Logic
- Fuzzy Systems
- Evolutionary Computation
- Evolutionary Algorithms
- Genetic Algorithms
- Swarm Intelligence
- Artificial Intelligence
- Mobile Computing
- Expert System
- Pattern Recognition & Medical Imaging
- Optimization
- Knowledge Discovery
- Digital Image Processing
- Cloud Computing
- Grid Computing
- Big data Analytics
- Internet Of Things
- Network Security

Articles are expected to contribute new and significant research, developments or applications of practical use and value.

IMPORTANT DATES

Last date for submission of Full Paper	: 7th **August, 2017**
Notification of Acceptance	: 16th **August, 2017**
Submission of Camera Ready Paper	: 30th **August, 2017**
Conference Date	: 15th **September, 2017**

GUIDELINES FOR PAPER SUBMISSION

- ☑ The papers should be based on original research work, yet to be published and not exceeding 6 pages.
- ☑ Manuscript must be prepared in IEEE format and mailed to **ncci@kristujayanti.com** on or before **7th August 2017**.
- ☑ All submissions will be peer-reviewed for originality, technical quality and novelty.
- ☑ Participation / Presentation of paper should be confirmed on or before **30th August 2017** by sending the completed registration form, along with registration fee.
- ☑ Papers will not be considered for presentation if plagiarized.

REGISTRATION FEE

CATEGORY	FOR AUTHORS	FOR PARTICIPANTS
Students	Rs.300	Rs.100
Research Scholars/Academicians	Rs.600	Rs.300
Industry Professional	Rs.750	Rs.500

- It is mandatory that atleast one author should register and present the paper.
- Certificate will be issued **only** to the registered authors.
- Presentation in absentia will not be entertained.
- Conference kit, lunch and refreshments will be provided to all the participants. No TA and DA will be provided.

MODE OF PAYMENT

Registration fee shall be paid by Demand Draft drawn in favor of **"The Principal, Kristu Jayanti College"**, payable at Bangalore. Please give the details of the participants on the reverse of the Demand Draft.

PUBLICATION

All papers submitted through NCCI-2017 will be double blind peer reviewed and evaluated by the review committee. All accepted and presented papers will be published in the **"International Journal of Computer Engineering and Applications (IJCEA)"** (ISSN: 2321-3469), an UGC Approved Journal.

ACCOMMODATION

Accommodation for outstation participants can be arranged on prior request to the Conference Convener.

Invitation

Kristu Jayanti College

AUTONOMOUS Bengaluru

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Department of Computer Science (UG)

Solicit your esteemed presence on the occassion of

NATIONAL CONFERENCE

ON

COMPUTATIONAL INTELLIGENCE (NCCI)

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ICT ACADEMY

Inauguration

Chief Guest

Prof. E . Balagurusamy

Former Member, UPSC, New Delhi

Former Vice Chancellor, Anna University, Chennai

Venue : Mini Audi - III | Date: September 15, 2017 | Time : 10:00 am

Programme Schedule

Date : 15-09-2017

Technical Session I

11:00 a.m - 12:00 p.m

Dr. Sitaram Ramachandrula

Master Data Scientist, Analytics Data Labs,
DXC Technology (erstwhile HPE Enterprise services), Bangalore.

Dr.Sitaram Ramachandrula has more than 20 years of research and development experience with emphasis on innovation and realization of complex systems involving research in Speech recognition, Offline handwriting recognition, Document Image Processing, Computer Vision, Biometrics, Data Analytics , Text processing , Design and Development of Embedded and DSP software. He is having 5 US patents, 5 defensive publications and around 40 research publications to his credit.

Topic : Making Decisions from Unstructured Data

Technical Session II

12:00 p.m - 1:00 p.m

Dr. Umamaheswari . E

Associate Professor,VIT, Chennai.

Prof. Umamaheswari is having over 12 years of Experience in teaching and research.Her research interests include Design, Development and Analysis of Software Products, Projects in the area of Internet, Intranet based Web and Standalone Client / Server Applications using Object Oriented Analysis and Design Methodologies.

Topic: Internet of Things

Technical Session - Paper Presentations

2:00 p.m

Valedictory

4:00 p.m

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From Vasanth Nagar / Cantonment Station /
Bangalore East Station : Bus Route - 292,292B,292C
Nearest Railway Station : Bangalore East (8 Kms) /
Bangalore Cantonment (10 Kms)
By Air : Kempegowda International Airport(28 Kms)

For Details Contact

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Website : www.kristujayanti.edu.in/ncci

Program Schedule

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DEPARTMENT OF COMPUTER SCIENCE (UG)

NATIONAL CONFERENCE ON Computational Intelligence (NCCI 2017)

PROGRAM SCHEDULE - 15th September, 2017

10.00 a.m. – 11:05 a.m.	**Inauguration**	Mini Auditorium-III
Chief Guest	**Prof E.Balagurusamy** Former Member, UPSC, New Delhi, Former Vice Chancellor, Anna University, Chennai.	Mini Auditorium-III
11:05-11:15 A.M	**Tea Break**	
11:15-12:15 A.M Speaker	**Technical Session I** ***Making Decisions from Unstructured Data*** **Dr.Sitaram Ramachandrula** Master Data Scientist, Analytics Data Labs, DXC Technology,Bengaluru.	Mini Auditorium-III
12:15-1:15 P.M Speaker	**Technical Session II** ***Internet of Things*** **Dr.Umamaheswari.E** Associate Professor,VIT, Chennai	Mini Auditorium-III
1:15 P.M -1:25 P.M	**Photo Session**	Main Entrance (Main Block)
1:25 P.M-1:55 P.M	**Lunch**	Food Court (Near Main Gate)
2:00 P.M-3:45 P.M	**Paper Presentation-Track I** **Chair: Dr. M. KRISHNAMURTHY** Professor & Head, Department of Computer Science & Engg., KCG College of Technology, Chennai.	Conference Hall-I (PG Block)
2:00 P.M-3:45 P.M	**Paper Presentation-Track II** **Chair: Dr. Hanumanthappa M** Professor and IT Head,Department of Computer Science and Applications, Bangalore University, Bangalore.	Conference Hall- II (PG Block)
4.00 P.M	**Valedictory**	Mini Auditorium-III (Main Block)
Chief Guest	**Dr. M. KRISHNAMURTHY** Professor & Head, Department of Computer Science & Engg., KCG College of Technology, Chennai.	
5:15 pm	**Hi-Tea**	

REPORT OF NCCI

DEPARTMENT OF COMPUTER SCIENCE

REPORT ON National Conference on Computational Intelligence

National Conference on "Computational Intelligence (NCCI-2017)" held on 15th Sep 2017 in association with ICT Academy Bangalore.

The main objective of this conference was to discuss the state-of-the-art developments, challenges and unsolved open problems in the field of Computational Intelligence. The conference promotes all aspects of computational intelligence theory, algorithm design, applications, and related emerging techniques. The National Conference on Computational Intelligence (NCCI-2017) will bring together leading researchers, engineers and scientists in the domain of interest across the country by providing a platform to present new advances and research outcomes in the field of Computational Intelligence

In inaugural function **Dr. S.Nagarajan**, Conference Convener, briefed about the objectives of the conference, themes and sub themes of the conference and number of papers received and accepted, review process, invited speakers and technical sessions of the conference. **Fr.Augustine George**, Vice Principal, gave message on the theme of the conference and felicitates the delegates and participants.

Prof.Balaguruswamy, Former member UPSC and Former Vice chancellor, Anna University and Chief Guest of the function released the conference Abstract proceedings and souvenir and delivered the inaugural address. In his inaugural address insist the importance of research in Artificial Intelligence & Computational Intelligence and relationship between the research and society.

Technical Session I, **Dr.Seetharam Ramachandralu**, Master Data Scientist, Analytics Data Labs, DXC Technology gave insights into 'Making Decisions from Unstructured Data'. Demonstration on converting speech to text is also given during the session.

Technical Session II, **Dr.Umamaheswari E,** Associate professor from Vellore Institute of Technology, Chennai provided valuable information on IOT. The IoT refers to the connection of devices to the internet. The speaker explained some research problems related to healthcare and also gave theoretical explanation on IOT.

Post Lunch session, paper presentations were chaired **by Dr.Hanumanthappa.M** , Professor and IT Head, Department of Computer Science and Applications, Bangalore University, Bangalore and **Dr. M. Krishnamurthy,** Professor & Head, Department of Computer Science & Engg., KCG College of Technology, Chennai. The paper presentations extended across two sessions and provided extensive information and insights into Computational Intelligence. The papers reflected current trends in neural networks, image processing, data mining and human computer interaction, to name a few. The Conference saw the participation from around 26 colleges with nearly 140 participants from in and around Bangalore and from

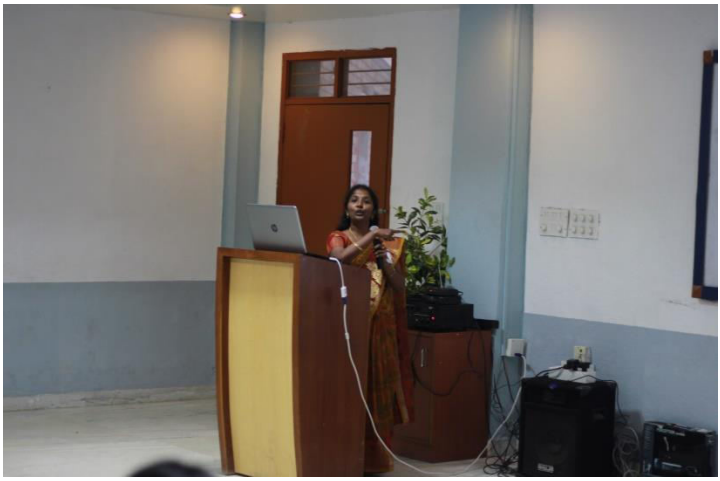
outside the state.

Dr.M.Ranjitha, Co-Convener presented a report of the proceedings of the conference. **Fr.Josekutty,**Principal,Kristu Jayanti College delivered the Felicitation. **Dr. M. Krishnamurthy,** Professor & Head, Department of Computer Science & Engineering, KCG College of Technology, Chennai, delivered the valedictory Address. He narrates about importance of two R (Result and Research) in Educational Institutions. The speaker briefed about the how the research paper should be prepared and what are the preliminary works has to be done by individual researcher while starting the new research. He also explained how an Educational institution forms the new research Centre. **Fr.Lijo P.Thomas**, Conference Chair distributes the Best Paper Award. Feedback was received from the few participants.

NCCI-2017-Photo Session

Inaugural Address by Prof.E.Balagurusamy

Technical Session- by Dr.UmaMaheswari



Paper Presentation by Delegate

Valedictory Address by Dr.M.Krishnamurthy

Best Paper Award

Feedback by Delegate

Feedback by Participant

Abstract Proceedings

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ABSTRACT PROCEEDINGS

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Message From Principal

The dawn of the computational era has piloted the entire globe into a superfast trajectory of transformation. The nonchalant 'algorithm' has become the cornerstone of progress in modern world. Every sphere of human development relies on computational sciences. Remote sensing in agriculture, revolutionary application of computer technology in bioscience and medicine, astral-space technology, multi-spatial super speed communication, knowledge explosion through cyber technology, disaster forecast and management, are a few mind-boggling contributions of computational scientists.

The millennial generation of software developers are the future visionaries of companies and nations. Man is able to withstand the vicissitudes of nature through computer and information technology. Artificial intelligence has emerged from laboratories and entered corporate think-tanks to design products to benefit common man. Human Development Index of all countries has seen a quantum leap due to path breaking application of artificial intelligence. Computational sciences have become the scaffolding that supports the success of a nation.

The Department of Computer Science, Kristu Jayanti College, Autonomous, has been charting a pathway of innovation and resilience. There is a sustainable quest to mould dynamic individuals and build a technologically robust society. The ***National Conference on Computational Intelligence (NCCI – 2017)*** is an endeavor to bring professionals and scholars to deliberate on the future of computational intelligence and contribute to the development of the nation. I wish the conference the very best. May this venture be a spark that ignites many new inventions in the field of computational intelligence.

Message From Vice Principal

The father of modern philosophy Rene Descartes said ‘I think therefore I am”. The existence and progress of humanity is due to the ability of people to think creatively. Every sphere of human realm requires creatively thinking people that is very much true with dynamic and rapidly changing environment of technology. The ideas that fulfill ever growing demands are derived from the hard work put in by researchers across the world. This national conference is organized to unleash a synergy of creatively thinking minds, fusion and diffusion of ideas and above all the realization of the enriching an enlightening power of knowledge.

As the Chief Patron of National Conference on Computational Intelligence (NCCI-2017) organized at Kristu Jayanti College, I congratulate the Department of Computer Science for the initiatives taken to bring the researchers across the nation in a common platform. I am confident that this conference will provide a stage to present and share the research findings for further enhancement and perfection. I am delighted to note that the accepted papers are being published in the UGC Approved journal-International journal of Computer Engineering and Applications (IJCEA).

I wholeheartedly appreciate all the sincere efforts of the entire team of NCCI 2017and wish them a grand success.

Message From Dean

Information Technology has taken the forefront surpassing agricultural transformation and industrial revolution. It is this magnificent power of computing that is prompting the utilization of Information Technology in each segment of human activity be it communication, banking, education, amusement, administration, etc. Similar to machines that have broadened man's mechanical power and his accommodation and solace, Information Technology, is expanding the mind and scholarly power of humankind. The term Information technology has expanded to include numerous parts of processing and innovation, and the term is more conspicuous than any other time in recent memory.

The National Conference on Computational Intelligence conceives to unite interdisciplinary analysts researching the interface between software engineering and the domains of bioscience. Discussions as this will be instrumental in creating novel strategies for data mining, representation and simulation. We sincerely believe this gathering will be a platform for scientific exchange of ideas and to provide an opportunity for dissemination of the latest results in research among the range of experts in the field of Computer Intelligence.

We are glad this conference attracts your attention. Welcoming you to this conference and inviting your remarkable suggestions to make our conferences more successful and perfect.

Message From Conference Chair

Kristu Jayanti College was established in the year 2001 with the vision of excelling in education to become an internationally renowned premier institute and I can proudly say that our National conference NCCI-2017 is a strong and steady step in this direction In a very short span of just 19 years, Kristu Jayanti College has become one of the leading colleges in the Nation due to its diligent adherence to quality in not just academics and infrastructure but also in creating the right impact on corporate sectors and national quality forums.

In this rapid technological advancements and globalization, the conference provide a platform for all the researchers to understand the problem areas in technology and provide solutions. Department of Computer Science, Kristu Jayanti College has understood the global technological requirements and created a platform of national conference for encouraging the research and development in almost all domains of Computational Intelligence.

The primary objectives of this conference is knowledge sharing, promoting research, networking among researchers and experts, industry-institute interaction, interdisciplinary learning and research, promoting upcoming technologies, understanding future trends and challenges, exploring emerging opportunities in Computational Intelligence.

I sincerely hope that One day of healthy interactions and proactive exchange of ideas will prove to be fruitful and contribute immensely to our mutual growth.

I congratulate participants, Delegates, Organizing Committee, faculty members and students for their outstanding contribution in organizing this conference successfully.

Message From Convener

Department of Computer Science is organizing first National Conference on Computational Intelligence (NCCI).

The major objective of this conference is to provide a common platform to academicians, research scholars and students from India to share their ideas & research experiences in various aspects of Computational Intelligence.

The conference will definitely provide a platform to discuss the problems in the area of Computational Intelligence viz. Fuzzy logic, Neural networks, Evolutionary computation, Artificial Intelligence, Network, IOT etc.

I extremely thank our management, Keynote speaker, advisory committee members, participants, reviewers, session chairs, organizing committee Members and all those who have helped us to organize this national Conference to make it a success.

Organizing Committee

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Rev. Fr. Josekutty P.D CMI
Principal

CHAIR PERSON
Rev. Fr. Augustine George CMI
Vice Principal

ADVISORY COMMITTEE
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Rev.Fr.Emmanuel P.J CMI
Dr. Calistus Jude
Dean of Sciences

CONFERENCE CHAIR
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Head,
Department of Computer Science (UG)

CONFERENCE CO-CHAIR
Prof. Sevuga Pandian
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Faculty Member – Department of Computer Science (UG)

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Mistral Solutions Pvt Ltd, Bangalore.
Mr.Vijayakumar Pujari, Head,
Telecom Division,Centre and Digital Electronics
Group ISRO Satellite Centre, Bangalore.
Dr. A. G. Ramakrishnan, Professor and Chairman,
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Indian Institute of Science, Bangalore.
Dr. Sridaran R, Dean,
Faculty of Computer Applications,
Marwadi University, Rajkot, Gujarat.
Dr. Mahesh Anand,
Founder & Chief Technology Officer,
Scientific Computing Solution, Chennai.
Dr. V. N. Manjnath Aradhya, Associate Professor,
Department of Master of Computer Applications
Sri Jayachamarajendra College of Engineering,
Mysore.
Dr. Pattabiraman.V, Associate Professor,
School of Computing Science and Engineering,
VIT University, Chennai.
Dr. Senthil Kumar, Asst.Professor(SG),
Dept.of Information Science and Technology,
College of Engineering, Anna University, Chennai.
Dr. Srinivasa Krishna Srivatsa, Rtd. Professor,
MIT, Chennai.
Dr. Noor Mahammad S K, Assistant Professor,
Computer Science and Engineering, IIITD&M,
Chennai.
Dr. Krishnamurty, Professor & Head,
Dept. of CSE, KCG College of Technology, Chennai.

CONTENTS

Enhanced Distributed Security Architecture for Authentication and Attack Prevention In 4G Networks

D.Niranjani, Dr. M. Ganaga Durga
Bharathiyar University,
Coimbatore

Abstract- Fourth Generation (4G) network is the highly advanced wireless network which aids broadband as well as multimedia applications. The increased set of features available at the user terminal also leads to the maximization of the security risks. It is susceptible to malicious attacks like corruption of the charge, Distributed Denial of Service (DoS) etc. Authentication techniques in 4G networks should provide integrity as well as should avoid this kind of attacks. Hence, to overcome the security problems in the 4G network, in this paper, an enhanced distributed security architecture for authentication and attack prevention is developed. In this proposed architecture, the Elliptic Curve Diffie–Hellman (ECDH) protocol is used for authenticating the mobile nodes within the network through hop by hop authentication and neighbor authentication. In order to prevent DDoS attack, shared authentication information approach is used.

A Modified Probabilistic K-D Tree Approach To Improve The Data Quality Of Sensor Network

Krishnendu Saha, Chandrani Ray Chowdhury
Computer Science, Brainware University
Kolkata.

Abstract— Sensor network is the collection of sensor nodes, which sends the live data (sensed data) to the base station or the nearest neighbors. As the sensor nodes are driven by limited power battery, an efficient utilization of energy is essential to use the network for a long time period and prevent data losses as much as possible. Data quality is directly related to a sensor node's life. Limited database memory, limited power and complex network structure are the main characteristics of a sensor node and it's a challenge to ensure data quality for the nodes. For all such nodes it is essential to ensure that each time the nodes form an updated route path and continue data sensing even if any failure occurs. The main goal of this paper is to improve data quality by implementing a mobile agent based algorithm, backup database approach, Tiny DB SQL filter query which will work for every node that has a probability of failure due to low energy. This paper mainly focuses on the improvement of data collection by using modified k-d tree approach.

Security Considerations For IoT Application Layers using MQTT

Vinutha M, Sankar Dasiga, Sumithra Amith
NMIT, Bangalore.

***Abstract*:** The concept Internet of Things(IoT) is a major developmental area of interest in the computer, information science and communication technology. Since IoT is used to the higher extent in soo many fields, using of IoT matters but the thing is how secure IoT communication is, hence security will acquire great effect in the domain of IoT. IoT, features and its systemic structure, analyzes the security problem of IoT in each and every layer of IoT communication like perception layer ,network layer and an application layer in the system of IoT, It puts forward the construction of secure IoT using MQTT protocol, as it offers the corresponding secure strategies based on the existing problems in the field of IoT. Hence, presentedideas to form the consistent security system for IoT. Since IoT is broadly used in many fields. Therefore the secure communication of IoT construction must be concentrated using the corresponding secure strategies like MQTT. HTTP has been majorlyused for data transfer. However, in the networks of IoT, this protocol causes a high overhead. To solve this issue, transfer protocols have been reviewed. When HTTP and MQTT has observed and compared, the performance of HTTP with that of MQTT is high and MQTT offers less overhead too. Hence, enhancements using MQTT has made to secure the IoT Network Technology for secure and better performance.

Comparisons Of Segmentations In Brain Tumor By Ant Colony Optimization And Genetic Algorithm

Dr.T.Logeswari
New Horizon College,
Bangalore.

Abstract: The brain tumor is detected through radiologist with help of MRI, which takes considerably a maximum time. Most of the brain tumor detection methods provide compound information about the brain tumor and they lack in providing an accurate result on existence of tumor. As a result, a formal consultation with a radiologist is mandatory, which becomes a surplus expenditure in case of a non-tumor patient. The objective of this research work is to develop a supporting system that would aid the radiologist to have aforementioned result which reduces the time taken in brain tumor detection. The proposed method consists of two stages. In the First stage Ant colony Optimization method combined with unsupervised method Fuzzy C

mean to detect brain Tumor. In the second stage Genetic algorithm combined with unsupervised method Fuzzy C mean to detect brain tumor. The study compares the two stages and shows that the most effective method Ant Colony Optimization (ACO) with FCM method reduces the time complexity for brain tumor detection which also includes more accuracy.

Image Morphing Using Hybrid Mesh-KLT Algorithm

Dr. Deepalakshmi . R,
Department of Computer Science,
Sir Theagaraya College,
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Abstract: Image morphing provides visual effects in tv and film. Image Morphing springs from the word Metamorphosis. Transition of source image to target is termed as Morphing. This is frequently used in an animation technique that morphs the initial image into the final image. The morphing strategy has 2 stages: Starting point it warps 2 pictures to possess similar form and in later step it cross dissolves ensuing pictures. This paper uses hybrid mesh-field warping methodology to make a structure of image morphing of facial animation with low simplicity. An attempt is made in morphing using hybrid mesh-KLT algorithmic rule combined with Cross Dissolving technique. During morphing method, the program can output N range of pictures. These pictures are used consecutive to develop a brief animated sequence.

Analysis Of NSS Image Characteristics

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***Abstract*:** Human society always demands for a tool that helps in analyzing the quality of the visual content getting transferred in the internetwork. This paper aims in analyzing the visual quality of NSS images by means of statistical analysis. Mathematical processing is done on the image and results reveal the quality value possessed by the given image. Objective analysis is then compared with subjective score to state the versatility of the method. Images from LIVE dataset is taken for experiment.

A Survey Paper On Methods Used For The Extraction Of Retinal Vessels For Diabetic Retinopathy

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Abstract: Due to the sedentary lifestyles these days, majority of the population in the developing and countries suffer from diabetes-a common disease due to body's inability to maintain its glucose level. A good count of them, have poor vision due to diabetic retinopathy. This disease, if diagnosed at its non-proliferative stage, can enable and make it easy for the ophthalmologists to find effective cure for it. Thus a lot of research has been done in order to automate imaging systems which can identify diseased retinal images from healthy ones. A very vital step in that is the segmentation of the blood vessels of retina from the other micro developments in the retina due to the diseased condition. Hence, in this paper, we have conducted a study of the various techniques available in the literature for the identification of retinal blood vessels.

Increased Productivity And Reduced Water Wastage Through Automatic Communicating Devices With Stored Threshold Values In Agriculture

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***Abstract*:** The growing population has increased the need for the increase in food production and the need for reduced water wastage. These days we can find the devices which are used for testing the dampness in the soil. But all these existing systems may just give us an alarm about the reading or just notify us about the same. I would like to propose an idea where we can integrate the dampness checking devices or the moisture sensing sensor device with the communicating device so that this application would open the valves to pump the water to the fields. The communicating device is set up with a predefined value called threshold value. The dampness level reading when read by the sensor is compared with the threshold value in the communicating device. If the value read by the sensor is less than the threshold value then the valve gets opened automatically and water will be pumped to the fields. If the value read by the sensor is greater than or equal to threshold value, then the valve closes automatically and then the pumping of water should be stopped. . With this proposed ideology one can save the water not flowing too much to the fields and the system makes sure that water wastage is completely

seized. Thus the moisture level is properly maintained and this can lead to proper food yield and enhanced profits for the famers.

Pattern Recognition:A Survey

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***Abstract*:** The main objective of the paper is to provide a better view and understanding about pattern recognition with the various methods and technologies undertaken in different fields and areas, based on the conclusion of my understanding of the various surveys conducted up to date. The paper aims to deliver the core objective by simplifying the methods and technologies used in pattern recognition leading to which complex problems are solved efficiently.

Sentimental Analysis of a product & its reviews using machine learning Technique

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Abstract: Due to the more volume of opinion rich web resources such as discussion forum, review sites, blogs and news corpora available in digital form, much of the current research is concentrating more on the area of sentiment analysis of the products Using Decission tree and Chi-square technique. People are intended to develop a system that can identify and classify opinion or sentiment as represented in an electronic text in mean of reviews. An perfect method for predicting sentiments could enable us, to extract opinions from the internet and predict online customer's preferences, which could prove valuable for economic or marketing research. This paper presents a survey covering on Sentimental analysis of the product and the reviews using machine learning technique.

A Case Study on TensorFlow And Artificial Neural Networks

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Abstract: There are a number of machine learning software in use. In this paper, we look at the implementation of artificial neural networks using TensorFlow – A machine learning software developed by Google. TensorFlow has been used to solve two image classification problems – Classification of digits of MNIST database and classification of traffic signs of GTSRB database. Classification of MNIST digits could be done with 99% accuracy after 20000 iterations with every 500 iterations taking about 25 seconds. Classification of GTSRB traffic signs could be done with about 70% accuracy with every iteration taking about 9 minutes. Both these neural networks have been trained and tested on a CPU at 2.3GHz and 4 GB RAM. It has been noted that CPUs are fast enough to implement neural networks on a small scale. For real world applications, neural networks should have considerably more parameters which can conveniently be trained and implemented on GPUs. It has been noted that TensorFlow is capable of handling convolutional neural networks (CNNs) in an efficient manner.

A Study on the Artificial Intelligence in Top Generation and Multidocument Summarization

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***Abstract*:** Artificial intelligence has drawn a lot of attention in both academic and industrial fields as vast amount of Text materials available in the various data source without of proper information management. To alleviate the problem, we analyse the sentence level clustering in terms of artificial intelligence paradigms in the area of document clustering, topic generation and multi document generation. In this paper, we study artificial intelligence models in detail for extracting topic and summarizing the document. Much significant impact on the sentence level clustering has made in order to establish the knowledge representation with effectiveness and accuracy. Though Extensive study, Future model for topic generation based on Hierrachical clustering and frequent Itemset mining is presented which is capable of identifying the overlapping clusters of conceptually and semantically related sentences.

The Credit Card Transaction Fraud Detection By Using Web Mining Technique

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Abstract: Credit card ackers looking for new ways to drain money from consumers' bank accounts and evade increased bank security measures have discovered a clever side door—the Starbucks mobile payment app and gift cards. Criminals are hijacking consumers' coffee accounts, draining the stored value of their cards, and then using Starbucks' auto-reload function to hack consumers' associated debit and credit cards.Credit card hackers are targeting third-party firms that create alternative payment systems and attacking them, finding they are often easier to hack than financial institutions. Fraud is moving away from banks into big e-commerce companies, Criminals are learning how to turn rewards programs, points and prepaid cards into cash.Here, through this paperwe propose method to dynamically identify characteristics pattern of customer then the incoming transactions are compared against the user profile to indicate the anomalies, based on appropriate message has been given. A FP tree based pattern matching algorithm is used to evaluate how unusual the new transactions are.

A Review on Educational Data mining Techniques and Recommendation Model in analyzing Student's Performance

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Abstract: The Mining of the education data is emerging trend in the learning analytics as it is time consuming to analyse the data and to identify the hidden information automatically. In this paper, detailed investigation about the educational data mining technique is carried out. The Application of the data mining includes storing and retrieval of the student data in the large repositories such as mark sheet, attendance sheet and student profile etc. The importance analysis is carried out on the retrieval of the large data using machine learning algorithm in the data mining. Along the retrieval of the data, nowadays deep focus is made on predicting and recommendation models which provide more effectiveness to the educational applications in terms of suggestions and extracting the correlation among the students. However handling of large data from repositories leads to performance bottleneck, hence it is resolved by employing

Map Reduce Paradigm from big data analytics.Through extensive study, classification and clustering provides more value for the data management, hence semantic and opinion mining is presented as the future research solution.

Accurate Brain Tumor Prediction System From The Large Volume Of Data Using Network Partitioning Aware Ensemble Classifier Method

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Abstract: Brain tumor prediction is the most concerned research field in the bio medical research environment where most of the people from all age categories affected by serious threats. Accurate brain tumour prediction requires analysis of large volume of health care data gathered from multiple users. However handling large volume of data would be more complex task which needs to be focused well for the accurate prediction rate. This is resolved in our previous research work by introducing the method namely Accurate Prediction of Brain Tumor Disease from Big Data Framework (APBTD-BDF). However this method might be reduced in its performance under presence of more inter communication between different parts of data. And also prediction accuracy might get reduced due to not providing preference on highly correlated features. These problems are resolved in the proposed research technique by introducing novel framework namely Network Cost aware Brain Tumour Prediction using Ensemble Classifier (NCBTP-EC). In this research method initially given input brain tumor data set is partitioned into multiple parts to make them execute in the multiple nodes with the concern of network communication cost. After allocating the data into multiple nodes, filtering is done by using Highly Correlated Filter which can remove the more repeated and similar data contents present in the system, thus the classification performance can be optimized. Finally Weighted Vote based Ensemble classifier involving Support Vector Machine (SVM), Adaboost and Random Forest classifier are applied to predict the brain tumour disease presence. The overall evaluation of the research method is conducted in the matlab simulation environment from which it is proved that the proposed research method leads to provide optimal outcome than the existing research techniques.

A Systematic review on Data mining Technique against Disease prediction system using Electronic Health Record

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Abstract: The data mining technique is employed on medical data is an emerging research in the medical field. Nowadays hospital management stores the health record of the patient in the database. In order to establish the effective medical information system to mine the large scale of data as a cluster based on the different diversity of disease. In this paper, detailed investigation on the disease prediction and disease clustering mechanism is carried out against various learning models in the literatures for medical record processing. Medical record is processed in various steps to extract the distinct feature in record. Also unsupervised model is employed to determine the various correlation of the feature to determine or predict the nature of the disease of the symptoms diagnosed and examined in the clinical trials. Many states of art approaches focus a solution of early diagnosis of the disease and its correlation other causes. Though extensive study, it is concludes that prediction algorithms provides better performance outcomes in the medical field, hence medication suggestion system to patient based on various characteristic of particular disease is proposed as future solution by employing the principle component analysis .

Predicting Risk factor of Lung Cancer Disease for Early diagnosis using FES

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Abstract: In the modern society of human life, disease is one of the major causes of illness and death. Diagnosing a disease is a risky process. Proper medical diagnosis would enhance proper medical care with reduced costs.Computer-based methods are used to improve the quality of medical services. Fuzzy logic and expert systems are the branches of Artificial Intelligence, that are applied in various areas especially in medical field.The paper describes the developed Fuzzy Expert system that diagnose the lung cancer. Fuzzy expert system model has been developed with two levels to evaluate the risk factors level I is based on the demographic data and level II is based on the output of level I and clinical symptoms.The developed model evaluates the lung cancer disease risk factor with the help of fuzzy expert system.Detection of diseases at very early stage would enable to overcome the disease.

Recital Comparison Of Bilingual Language Using Various Filters For Offline Handwritten Character

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Abstract: Optical Character Recognition (OCR) of multilingual document containing Offline Handwritten Character (OHC) in regional languages of India, it is necessary to identify different script forms before running an individual OCR of the scripts. In this paper, novel approaches for offline character recognition are written in south Indian languages such as Tamil and Kannada. Preprocessing is one of the most important phases in OCR development. It directly affects the efficiency of any OCR. In this process an extracting of basic constituent symbols of the script. Different methodologies which are growing rapidly in the area of character recognition is South Indian Languages. In this paper, it is mainly focused on the existing methodology used in different stages of OCR to recognize offline handwritten character of bilingual regional languages of South India such as Tamil and Kannada are reviewed, summarized and documented.

A study on the Electroencephalography Control schemes for pattern recognition

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Abstract: The research proposes an Exploratory study of simple and efficient movement classification technique for Electroencephalography control schemes on brain fingerprinting .The pattern recognition using Electroencephalography is analysed in detail in this work. Most brain fingerprinting using Electroencephalography control studies on brain waves have shown good performance. The Control generated can be acceptable or unacceptable. As an analysis, in this work, focus is made on efficient pattern recognition on the Electromyography for the application (human) brain fingerprinting. The signal is neural signals which gathered from the sensor of Electroencephalography Recording site can be used as input to decide the brain signal. The Signals were segmented and features were extracted with time domain feature extraction methods. The feature considered is various gestures. The control scheme is modelled with supervised and unsupervised learning mechanism for muscle configurations. In this work, detailed analysis various control mechanism for pattern recognition and classification carried

with merits and demerits using fuzzy logic control. The pattern recognition through control scheme will be capable distinguishing the source to improve the classification performance in controlling functioning in the brain fingerprinting. The outcome of this study encourage in modelling the new control scheme with novel ensemble classification technique for brain fingerprinting application to any king brain waves.

Analyzing The Safety In Traffic Navigation

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Abstract: In real time traffic situations a driver encounters a number of traffic signs and road signs, which may go unnoticed by the human eye due to lack of awareness. This paper highlights the challenges associated with automotive safety in the real time traffic navigation. In real time traffic scenario, driver should not only maintain traffic regulations but also observe the adjacent moving vehicles. A preliminary research has been carried out in assisting the driver with the information of other approaching vehicles. One of the parameters for alarming the driver is speed of the approaching vehicle. With an effective method for tracking and proper calibration of the camera for real time traffic scenarios, speed detection is possible. Some of the existing approaches use perspective or linear projections to model the camera for the purpose of calibration. The effective method of calibration to be used for a real time traffic scenario depends on the complexity of the system and assistance provided to the driver. The exact speed determination with multiple target tracking is still a crux in real time traffic navigation research. We, hereby, propose an image mining and computer vision based approach using single camera mounted on the moving vehicle to capture the front view.

F_6 Domination of Graphs

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Abstract-Let G be a simple, connected, undirected graph. Let every vertex of G be coloured either blue or red. Let F be another graph with red-blue vertex-colouring. One of the blue vertices of F is designated as the root vertex of F. If F is a subgraph of G, then we may find copies of F in G considering the colouring of G as well as that of G. Chartrand et al. [1], introduced this particular type of colouring and associated domination concepts. An F-colouring of G is such that every blue vertex *v* of G belongs to a copy of F rooted at v. The F-domination number $\gamma_F(G)$ of G is the minimum number of red vertices G in all possible F-colourings of G. As per the red-blue colouring, there are seven connected graphs of order 3. Chartrand *et al*. named the cycle C_3 with two red vertices and one blue vertex as F_6.[1] They proved that for a graph G of order n in which every vertex is in a C_3, $\gamma_{F6}(G) \leq (2n/3)$. We present here an alternate proof analyzing various structures of a graph or order n in which every vertex is in a C_3.

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