

FACULTY ACHIEVEMENTS

2023 - 2024

October - December 2023



Dr. Revathi V, has published a Book Chapter in <Technological advancement in modern Engineering= Volume 1 - Chapter 8: Big data in healthcare, ISBN : 978-93- 95196-67-3 by ESN publications in September 2023. She also coordinated the workshop on Virtual lab on 13th October 2023. and also granted the UK design patent entitled <AI- ENABLED CHARGING STATION FOR ELECTRIC VEHICLES= on 14th November,2023 with submission Number 6324117.



Dr. Rajesh T M, along with Dr. Sharath, M.N, Surabhi, K.R., Nikshepa, T., Sowmya, S.R. has published a paper in 14th International Conference on Advances in Computing, Control, and Telecommunication Technologies, ACT 2023, 2023, pp. 1497-1502 titled=Detection and Classification of Blood Cancer using an Auto Encoder and a Regularised Extreme Learning Machine= indexed in Scopus and also published an IEEE Conference paper titled= OrthoSNet: A framework for Identifying and Verifying Tuberculosis in Chest Radio graph images using Discrete Orthonormal Stockwell transform= indexed in Scopus on 28th November,2023.



Dr. Mouleeswaran S K has published a Book Chapter in <Technological advancement in modern Engineering= Volume 1 - Chapter 9:Securing the Storage Infrastructure, ISBN : 978-93-95196-67-3 by ESN publications in September 2023.



Prof. Ranjini K, has published a Book Chapter in <Technological advancement in modern Engineering= Volume 1 - Chapter 10: Machine Learning in Healthcare: Breast Cancer Detection, ISBN : 978-93-95196-67-3 by ESN publications in September 2023.



Prof. S Maragatham completed a MOOC Course on NPTEL titled <Python for Data science= course duration from August-October, 2023.



Dr. Arunkumar Gopu has published a paper titled <Energy- efficient virtual machine placement in distributed cloud using NSGA-III algorithm= in the Journal of Cloud Computing, Springer. The Journal of Cloud Computing is a peer-reviewed journal with an impact factor of 4.4, indexed in SCI, WoS, and Scopus.



Dr. Meenakshi Malhotra, Kiran Waghmare, has published an Indian patent with title =Wellness Application for Analyzing EEG Signals and Assisting Individuals with Mental Health Disorders=,202341043756 on 1st September,2023 and also granted with an Indian patent with title <GENERATING STREAM-CIPHERED DOUBLE-KEY USING A RANDOMIZED-MATRIX= 202341019607 on 5th October,2023.



Dr. Praveen Kulkarni and Dr. Rajesh T M has published a paper in IEEE International Conference on Contemporary Computing and Communications (InC4)979-8-3503-3577-4/23/\$31.00,2023 IEEE titled= Facial Emotion Detection Using Deep Learning:A Survey= indexed in Scopus.



Prof. Naitik ST, Assistant Professor, CSE have published a research article in the International Neurourology Journal, Korean Continence Society publisher. The title of the research article is <Design and Development of Model Using Fingervein Authentication by Convolution Neural Network=ranked Q2, SCI and Scopus indexed with Open Access and SCI in December,2023.



Prof. Priyanka Singh, Assistant Professor, CSE along with co-researchers has been granted with a patent entitled <Multi-Sensor Real-Time Sorting Modular Robot= with UK Design (Design Number 6304989).



Dr. George Fernandez I, Associate Professor, has served as Session Chair in 3rd International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES-2023) on 14th and 15th of December,2023.



Dr. Pramod Kumar Naik, Associate Professor, delivered 2 days hands-on workshop on “From Concept To Reality : Connecting The Dots” at Malnad College of Engineering, Hassan on 13th and 14th of February,2024.



Dr. Pramod Kumar Naik, Associate Professor, has achieved the milestone of completing a Master of Business Administration (MBA) degree with dual specialization from Liverpool John Moores University, London, UK. This degree holds recognition from the World Education Services (WES).



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DR. ARUNKUMAR GOPU
ASSOCIATE PROFESSOR,
DAYANANDA SAGAR UNIVERSITY.

Dr. Arunkumar Gopu, Associate Professor, recently delivered a guest lecture at VIT-AP University, Andhra Pradesh India on 1st February, 2024. The lecture focused on the application of multi-objective optimization techniques for solving real-time problems. He discussed the theoretical underpinnings of these methods and explored their practical applications in various real-world scenarios. The talk was well-received by the audience.



Dr. Rajesh TM, Associate Professor, at Dayananda Sagar University, showcased his expertise and commitment to academic excellence by participating as a Member of the Technical Program Committee at the 2024 IEEE International Conference on Contemporary Computing and Communications (InC4). The conference, organized by the Department of Computer Science and Engineering at CHRIST (Deemed to be University) in Kengeri Campus, Bangalore, served as a premier platform for scholars and researchers to exchange insights and advancements in contemporary computing and communication technologies.



Dr. Rajesh T. M has contributed as a reviewer for the "International Conference on Emerging Technologies in Computer Science for Interdisciplinary Applications (ICETCS) 2024" organized by Department of CSE, AI-DS, CSE(ICB), B. M. S. College of Engineering, Bangalore and IEEE Bangalore Section during 22nd and 23rd April 2024.

Dr. Rajesh T. M has published a journal paper in Indonesian Journal of Electrical Engineering and Computer Science, ISSN NO-2502-4752, Volume No-33, Page No-1715 titled "Evaluation of filtering and contrast in X-ray and computerized tomography scan lung classification" indexed in Scopus.

Dr. Rajesh T. M has published a paper in IEEE International Conference on Evolutionary Algorithms and Soft Computing Techniques (EASCT), ISBN NO- 979-8-3503-1341-3 titled "Credit Risk Customers Categorization with Random Forest Classifier using Various Searching Techniques" indexed in Scopus.



Dr. Basavaraj N. Hiremath, an esteemed member of the Infosys SpringBoard community, has been recognized with the prestigious SPoC (Single Point of Contact) of The Month Award for April 2024.



Prof. Naitik ST has published a conference paper titled "Correlation Based Lightweight Risk Assessment Framework for Advanced Persistent Threat" presented at The International Conference on Next Generation Digital Technologies (ICNGDT) held on January 5, 2024, indexed in Scopus



Dr. Bipin Kumar Rai, Professor in the Department of Computer Science and Engineering, dedicated 40 hours over 10 days to attend a Faculty Development Program (FDP) titled "Deep Learning and Its Applications." This FDP was organized by NIT Warangal (EDIET Academy) and took place from March 21, 2024, to March 30, 2024.



Dr. Revathi V, has published a conference paper in Springer titled "Decentralized Healthcare Ledger system on Hedera with deep learning analytics" presented at The International Conference on Computing and Machine Learning held on March 29th, 2024, indexed in Scopus



Dr. Bondu Venkateswarlu, Associate Professor, Dayananda Sagar University, received BITES Best PhD Supervisor Award- 2021 from BITES Best PhD Thesis Awards 2021 Ceremony on 2nd April 2024 at SIT Thumakuru, Karnataka.



Dr. Bondu Venkateswarlu, Associate Professor has published a research article in International Journal of Intelligent Systems and Applications in Engineering with the title “ULODF: An Unsupervised Learning based Outlier Detection”, indexed in Scopus.



Dr. Pramod Kumar Naik, Associate Professor, delivered an insightful presentation on April 7th 2024 at the “Education Fair and Seminar - Edu Expo” held in Hosur's Hotel Hills organized by Alliance University. The session focused on elucidating the reasons why students, upon completing their PUC, should consider DSU, Bangalore, for their engineering education. Through an engaging discourse, he highlighted the myriad opportunities available to students after pursuing various programs at DSU, including BE, MBA, and MTech. The central theme of his presentation revolved around the dynamic fields of AI, Robotics, and ML, underscoring the university's commitment to excellence in these domains.



Dr. Amit R Bhat, Vice Chancellor, DSU engaged a session on Pipelining for the Computer Organization and Architecture course on 16th April 2024 for 4th semester students in DSU, Harohalli campus. In the session he discussed principles of Pipelining, including its stages, its benefits in enhancing CPU performance and the challenges it presents.



Dr. Pramod Kumar Naik, Associate Professor and Dr. Basavaraj N. Hiremath, Professor, jointly published a research article in Journal of Electrical Systems (JES) with the title "Ultra-Fast BNN Analysis with the upgraded FINN Framework: Harnessing GoogLeNet and Contemporary Transfer Methods for deploying algorithms on Nvidia GPU", indexed in Scopus with Q3.



Mr. Benaka Santhosha S, Assistant professor, presented and published a paper in International Conference on Integrated Circuits and Communication Systems (ICICACS)-2024 organized by Department of Electronics and Communication Engineering, H.K.E. Society's Sir M Visvesvaraya College of Engineering, Raichur with the title "A Comprehensive Study on Various Encryption Techniques for Digital Images in Multimedia Networks" in IEEE, with DOI: 10.1109/ICICACS60521.2024.10498590.



Prof Mala B A and Prof Suvika K V, Assistant Professors, have successfully participated in 2 weeks International FDP on “Advancement in Quantum Computing and Sensor Technology for viksit Bharat @2047, from 15th to 27th April conducted by The Oxford College of Engineering, Bengaluru.



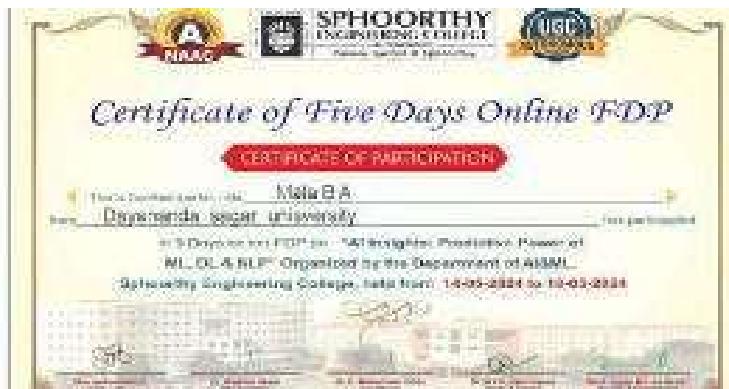
Dr. Bipin Kumar Rai, Professor, Dept of CSE, contributed as a session chair in the 2nd International Conference on Disruptive technologies (ICDT-2024) on 15th and 16th March 2024 organized by Department of Computer Science and Engineering, GL Bajaj Institute of Technology and management, Greater Noida (U.P), India.



Dr. Meenakshi Malhotra, Associate Professor, Dept of CSE has successfully completed 12 weeks NPTEL Online Certification course on "NBA Accreditation and Teaching-Learning in Engineering (NATE)" as Elite and **Topper with 88% in May 2024.



Dr. George Fernandez and Dr. Revathi V, Associate professors, extended their service as a session chair for the technical presentation session and contribution towards the successful organization of IEEE sponsored 2024 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI-2024) held at St. Joseph's College of Engineering, Chennai, Tamil Nadu during 9th and 10th may 2024.



Prof Mala B A and Prof Suvika K V, Assistant Professors, have successfully participated in 5 days online FDP on “AI insights: Predictive power of ML, DL and NLP”, from 14th to 18th May conducted by Sphoorthy Engineering College.



Prof. Kavyashree I Pattan, Assistant Professor, Dept of CSE has successfully completed 12 weeks NPTEL Online Certification course on “Computer Network and Internet Protocol” as Elite with 77% in May 2024.



Dr. Bipin Kumar Rai, Professor, Dept of CSE has filed an Indian patent for the title "Smart water Bottle" in Jan 2024 and approved grant in May 2024.



Dr. Bipin Kumar Rai, Professor, Dept of CSE, has published a research article in 4th International Conference on Recent Trends in Machine Learning, IoT, Smart Cities and Applications. ICMISC-2023 with the title "Clean Sustainable Society Using CNN " in Springer conference, ISBN978-981-99-9441-0 in May 2024.

Journal of Xi'an University of Architecture & Technology ISBN No : 1006-7930

SURVEY ON ENHANCING THE DETECTION OF FRAUD IN CREDIT CARD TRANSACTION USING MACHINE LEARNING TECHNIQUES

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ABSTRACT : Credit cards are an integral part of modern life, facilitating transactions for individuals, businesses, and global commerce. However, this convenience comes with the risk of fraudulent activities, which can have severe financial implications. Despite ongoing efforts by financial institutions to enhance their prevention measures, criminals continuously refine their strategies, exploiting vulnerabilities in electronic transactions. To tackle this persistent challenge, there's a pressing need for sophisticated fraud detection solutions. This project aims to address this issue by providing insights into global credit card fraud statistics, with a specific focus on the Indian context. It explores various types of fraud, considers a thorough evaluation of multiple machine learning algorithms, and compares their performance. Noteworthy, the project delves into advanced fraud detection tactics, highlighting their strengths and limitations, while suggesting potential remedies. One notable approach employed is Ensemble Stacking, a technique that amalgamates diverse base models like Decision Trees, Gradient Boost, Bayes, Random Forest, and KNN. By leveraging ensemble stacking, the project seeks to enhance the accuracy of fraud detection, thereby fortifying efforts to combat credit card fraud effectively.

Prof Naitik ST, Assistant professor, has published a research article in the Journal of Xi'an University of Architecture & Technology along with the students (Kushal Reddy HG, Nithin V, Manjunath M, Kumara) with the title "Survey on Enhancing the Detection of Fraud in Credit Card Transaction Using Machine Learning Techniques", ISBN 1006-7930 and publisher is Science China Press indexed in Scopus during May 2024.

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ENHANCING THE DETECTION OF FRAUD IN
CREDIT CARD TRANSACTION USING
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Abstract: Credit cards are a vital part of modern life. Credit card fraud, theft, and illegal operations. While they offer convenience and financial advantages, the prevalence of credit card fraud remains a significant challenge. In this research, we propose a fraud detection model using ensemble stacking. Credit card fraud detection is a critical part of credit card systems. It is a challenging task due to the high volume of legitimate and fraudulent transactions. The proposed model uses ensemble stacking to improve the accuracy of fraud detection. The results show that the proposed model outperforms individual models in terms of accuracy and detection rate.

Prof Naitik ST, Assistant professor, has published a research article in the Dizhen Dizhi Journal along with the students (Kushal Reddy HG, Nithin V, Manjunath M, Kumara) with the title "Enhancing the Detection of Fraud in Credit Card Transaction Using Ensemble Stacking", ISBN 2534967 and publisher is SSA indexed in Scopus during May 2024.

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Crowdsourcing of Criminal Records from Digital Identities of Individuals using AI

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ABSTRACT:

In the age of digital transformation, the exponential growth of online data presents both challenges and opportunities for law enforcement and criminal justice systems. This paper explores the creation of an approach for crowdsourcing criminal records from the digital identities of individuals using advanced machine learning (ML) techniques. Crowdsourcing leverages the collective intelligence of the public to gather and verify information while AI enhances the efficiency and accuracy of processing vast amounts of digital data. The proposed method involves the integration of machine learning algorithms, natural language processing, and pattern recognition to analyze digital footprints from various online platforms, including social media forums, and public databases. By doing so, it aims to identify and mitigate potential criminal records and suspicious activities associated with individuals. This approach not only aids in enhanced efficiencies and automation in policing but also creates a reliable and up-to-date repository of criminal records.

Keywords: Crowdsourcing, Artificial Intelligence, Criminal Records, Digital Identity, Machine Learning, Privacy, Ethics, Law Enforcement.

Prof Naitik ST, Assistant professor, has published a research article in the Journal of Xian University of Architecture & Technology with the title "Crowdsourcing of Criminal Records from Digital identities of Individuals using AI", ISBN 1006-7930 and publisher is Science China Press indexed in Scopus during May 2024.



Prof Suvika K V and Prof. Arpita Paria, Assistant Professors, have successfully attended one-week National Level online Workshop on "Next-gen Web Tech Intensive: React, Angular JS, Kubernetes, Docker, MongoDB" organized by Dept. of ISE in association with Start-Up EduCast, CMR Institute of Technology, Bangalore from 27/05/2024 to 31/05/2024



Dr. J. S. Nixon, Professor and Prof Priyanka S Marellavar, Assistant Professor, have successfully participated one-week online FDP on the topic "Cyber-Physical System Design and Data Analytics" (CSDA-2024) given by Dr. Sudip, IIT Roorkee, Uttarakhand, organized by AGKS Pvt. Ltd from 3rd June to 8th June 2024.



Dr. Bipin Kumar Rai, Professor, Dept of has Presented research paper entitled "Smart Transplants: Blockchain Powered Organ Donation & Analytics" in 5th International Conference on Data Analytics & Management (ICDAM-2024) Organized By London Metropolitan University, London, UK and BPIT New Delhi on 14th June 2024.



Dr. Bipin Kumar Rai, Professor, Dept of CSE extended his service as a Paper Reviewer in 2nd International Conference on Computer, Electronics and Electrical Engineering and their Applications (IC2E3-2024), held from 6th and 7th June, 2024 at NIT Uttarakhand, (IEEE, Scopus).



Dr. Senthil Kumar, Professor, Dept of CSE, has published a book chapter with the name "AI-Driven Alzheimer's Disease Detection and Prediction", by the publisher IGI Global Publishing with the volume no chapter 13 and ISBN 9798369336052 in June 2024



Dr. Senthil Kumar, Professor, Dept of CSE has presented and published a paper with the title "Detection of Leaf Blight Disease in Sorghum Using Convolutional Neural Network" and ISSN NO CCIS, volume 2122-page no 123-134 by the springer conference Intelligent Computing for Sustainable Development during 1st June 2024.



Dr. Senthil Kumar and Dr. Nixon J S Professors, Dept of CSE have published a paper with the title "A Novel approach for detection and Identification of Vehicles using Single Shot MultiBox Detector (SSD) and Real Time Analytics" on 13th June 2024 by Scopus journal Q4, Educational Administration: Theory and Practice, with DOI <https://doi.org/10.53555/kuey.v30i6.5892> ISSN: 2148-2403, Vol. 30 No. 6 (2024).

The screenshot shows the homepage of the International Journal of Intelligent Systems and Applications in Engineering. The header includes the journal's name, ISSN (2147-6799), and a search bar. Below the header, a featured article is displayed with the title 'A Novel Data Stream High Utility Itemset Miner with the Batch Transaction Processing Model'. The article summary, authors, and citation information are visible.

Dr. Bondu Venkateswarlu, Associate Professor has published a research article in International Journal of Intelligent Systems and Applications in Engineering with the title "A Novel Data Stream High Utility Itemset Miner with the Batch Transaction Processing Model", indexed in Scopus with ISSN NO 21476799, volume no 12 and page no 1675–1686 during June 2024



Prof. Shreekant Salotagi, Assistant Professor, Department of CSE has successfully completed Final Ph.D Viva Voice on the Thesis entitled "Optimization of Resource Allocation in Internet of Things (IoT) Applications" under the guidance of Dr. Jayshree D. Mallapur Professor & Head, BEC. Bagalkote, (VTU Belagavi), The defense panel consisted of Dr. Gopalkrishna Hegde, Professor, IISc Bangalore, and Dr. Shashidhar G. Koolgudi, Professor, Dept. of CSE, NITK Surathkal on 21/06/2024.



Prof. Shilpa Sudheendran, Assistant Professor, Department of CSE has successfully completed the following online courses on Coursera.



- i) Exploratory Data Analysis for Machine Learning, an online non-credit course authorized by IBM and offered through Coursera on Jun 14, 2024.
- ii) Foundations: Data, Data, Everywhere online non-credit course authorized by Google and offered through Coursera on Jun 20, 2024.
- iii) Ask Questions to Make Data-Driven Decisions, an online non-credit course authorized by Google and offered through Coursera on Jun 20, 2024.



Prof Suvika K V, Assistant Professor, has successfully completed the online course on Infosys Springboard titled “Machine Learning & Deep Learning Tools in the Cloud” on June 19, 2024



Prof Suvika K V and Prof Mala B A, Assistant Professors presented and published a paper in scopus indexed conference “International Conference on Emerging Technologies in Science and Engineering-ICETSE-2024” with the title “A Survey on Application of Analytics in Legal Profession” during June 2024 organized by Akshaya Institute of Technology, Tumkur.



Prof Soubhagyalakshmi, Assistant professor, Department of CSE has successfully completed Final Ph.D Viva Voice on 28th June 2024 Under Visvesvaraya Technological University (VTU) Belagavi.