TECH ERA

STUDENT TECHNICAL MAGAZINE

VOL-IX
2023-24, issue 1

DEPARTMENT OF IT (LBRCE)

VOL I-IX
Photo - Mitia

FORE WORD

Department of Information Technology involves researching, designing, developing in current trends of computing systems. It gave me great satisfaction to know that department has come up with its own magazine, "Tech- Era". The way they presented it was unique, very creative and hope it will serve as a motivational and technological source for the students to exhibit their inherent talents and improve their skills. I would like to express my appreciation to whole team members of Tech-Era including faculty coordinators who really made it possible.

Dr. K. APPA RAO
PRINCIPAL

Congratulate the department of IT, LBRCE for bringing out the prestigious bi-annual magazine, Tech-Era. I am sure that the magazine will provide a platform for students and faculty members to expand their technical knowledge and sharpen their hidden literary talent and also strengthen all round development of the students. My congratulations to the editorial board who took the responsibility for the arduous task Dr. B. Srinivasa Rao most effectively.

Dr. B. Srinivasa Rao
Professor & HOD

DEPARTMENT OF INFORMATION TECHNOLOGY

VISION AND MISSION

DEPARTMENT VISION

To emerge as one of the most preferred departments for the budding engineers, aspiring to be successful IT professionals

DEPARTMENT MISSION

DM1: To impart quality education with a well-designed curriculum, consistent with industry requirements, that equips the student to face the career challenges.
DM2.: To extend the student's learning beyond the curriculum, through workshops on cutting edge technologies.
DM3: To strengthen creativity and team spirit of the students by providing a conducive environment, preparing them to face the challenges posed by the IT industry.
DM4: To develop life-long learning, ethics, moral values and spirit of service so as to contribute to society through technology**.**

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates of Information Technology programme will be:

PEO 1: Pursue a successful career in the area of Information Technology or its allied fields.

PEO2: Exhibit sound knowledge in the fundamentals of Information Technology and apply practical Experience with programming techniques to solve real world problems.

PEO3: Demonstrate self-learning, life-long learning and work in teams on

multidisciplinary projects.

PEO4: Understand the professional code of ethics and demonstrate ethical behavior, effective Communication and team work and leadership skills in their job

PROGRAM OUTCOMES (POs):

Graduates of Information Technology programme will have the ability to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modem engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for

sustainable development. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs):

Graduate of the Information Technology will have the ability to

PSO1: Organize, Analyze and Interpret the data to extract meaningful conclusions.

PSO2: Design, Implement and evaluate a computer-based system to meet desired needs.

PSO3: Develop IT application services with the help of different current engineering tools.

About the Department

The department of Information Technology was established in the year 1999 with an intake of 40 seats in UG program. Student intake is increased from 40 to 60 in the year of 2001, 120 students in the year 2019. It is the one of the most emerging

programmes in LBRCE. As IT plays a remarkable role in almost all sectors, due to this the need of Information Technology Engineers increased who could gain knowledge in recent technologies. Our department is intended to train the students in elementary courses and cutting-edge technologies like Cloud Computing, Android application, Big data, Digital marketing, Social networking and Digital communication for solving many social and business problems.

The department strives to be a centre for excellence, innovation and research with dedicated faculty, highly motivated students, state-of-the-art facilities and an innovative teaching-learning environment. The department was accredited by the National Board of Accreditation (NBA) for 3 years i.e 2008 and 2019 (Under Tier-I), valid up to Academic Year: 2021-22. The department has consistently demonstrated its potential for excellent research through sponsored research projects, consultancy work, high-quality scholarly publications, text books, open-source software and other professional contributions. Several research and consultancy projects are also underway as part of various MoUs with reputed industry and academic organizations. Our students have consistently achieved 100% placements and have demonstrated a high level of success in pursuing post graduates at top universities of the world as per QS World University Rankings, like Massachusetts Institute of Technology, Carnegie Mellon University, Yale, Columbia, Purdue and in the IITs & IIMs.

Our future Software Engineers, Entrepreneurs, and Researchers are encouraged with inventive approach. We have an excellent infrastructure and advanced labs to expedite our students. The department facilitates innovative practices such as student internships, mini and major projects to meet the requirements of employment, teaching-learning process and entrepreneurship. To upgrade the knowledge of students, department offers many tools and Software applications. The LBRCE-CSI students' chapter has been actively organizing events like Technical Seminars, Workshops and Guest lecturers.

STUDENT ARTICLES

Consolidated Data

S.NO	Articles -3	Papers-6
1	The Cyber Fies: Exloring the Truth behind the Threats.	A Multi-level Optimized Strategy for Imbalanced Data Classification Based on SMOTE and AdaBoost
2	AI-driven Navigation in moder WAFARE and beyond.	Image Restoration Using ResNet–VGG Autoencoder Model
3	The Tech-Edge	Automatic COVID Protocols-Based Human Entry Check System
4	Hygeine Matters: Small Habits,Big Impacts	An Ensemble Deep Transfer Learning and SMOTE Model for Classification of Alzheimer's Disease
5		The Ensemble Method for Intrusion Detection System Using Bagging–Autoencoder and PSO
6		Optimization of Users EV Charging Data Using Convolutional Neura Network

18 April,2024

THE CYBER FILES

EXPLORING THE TRUTH BEHIND THREATS

In today's digital world, cybercrime is not just a distant threat—it's a reality that affects everyone. From individuals to multinational corporations, no one is immune to cybercriminals lurking in the shadows of the internet. The Cyber Files is your ultimate guide to uncovering the hidden dangers of the cyber world, revealing how hackers operate, and most importantly, how you can stay protected.

The internet has become an essential part of our daily lives, but with its vast opportunities come unseen dangers. Cybercrime is no longer science fiction—it's a real and growing threat. From identity theft and ransomware to phishing scams and data breaches, digital criminals are always evolving.

At The Cyber Files, we believe that awareness is the first step toward protection. Our goal is to expose cyber threats, educate readers, and empower individuals and businesses with the knowledge to stay one step ahead of hackers.

In the vast and ever-evolving digital landscape, cybercrime has become a silent predator, targeting individuals, businesses, and even governments. From data breaches and identity theft to ransomware attacks and dark web dealings, the online world hides a web of deception that few truly understand. The Cyber Files is your gateway to the truth, uncovering the tactics of cybercriminals, exposing hidden threats, and equipping you with the knowledge to stay protected. In an age where a single click can compromise security, awareness is your strongest defense. Stay informed, stay secure, and join us in the fight against cybercrime.

A.Aiswarya
22761A1270

AI-DRIVEN NAVIGATION IN MODERN WAFARE AND BEYOND

Hello Everyone ,

I am Kranthi Kiran Jeedimalla, and I am here to discuss an exciting and impactful topic—AI-driven navigation in modern warfare and beyond. As we move further into the era of Artificial Intelligence, we are witnessing groundbreaking advancements that are reshaping not only defense systems but also various industries, from aerospace to transportation.

Introduction to AI-Driven Navigation

Artificial Intelligence (AI) has emerged as a game-changer in modern warfare. Today, AI-driven navigation is at the heart of military technology, enabling autonomous drones, smart missiles, and AI-powered UAVs to operate with remarkable precision and autonomy. These advanced systems integrate machine learning, computer vision, and sensor fusion to navigate dynamic environments, adapt to changing conditions, and make real-time decisions with minimal human intervention.

Current Impact of AI in Defense

Right now, AI is being extensively used in military applications, significantly reducing human risk while improving operational efficiency. AI-powered autonomous weapons are capable of self-learning, real-time decision-making, and dynamic mission adaptation, making them highly effective in combat situations. Loitering munitions (suicide drones), smart surveillance systems, and robotic ground vehicles are already being deployed to enhance defense capabilities.

The Future of AI-Driven Navigation

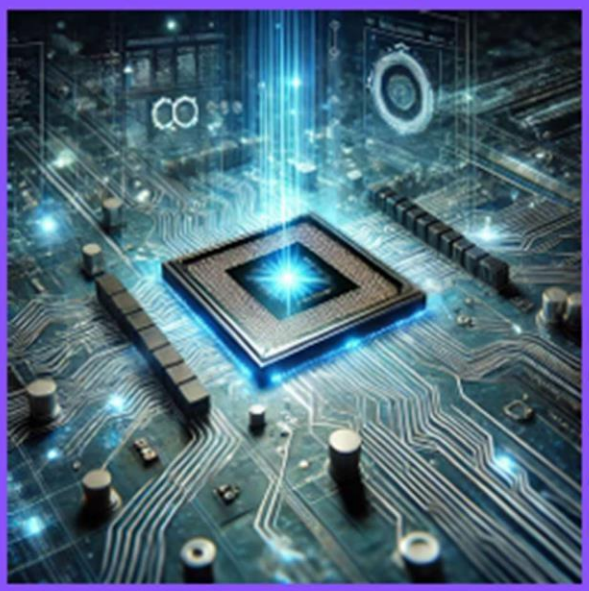
Looking ahead, AI-driven navigation will become even more advanced with the integration of quantum computing, deep learning, and real-time situational awareness. These innovations will bring unprecedented autonomy, accuracy, and intelligence to military systems. In addition, brain-machine interfaces (BMI) and next-generation AI algorithms could allow direct human-AI collaboration, further enhancing the capabilities of modern defense systems.

However, the impact of AI-driven navigation is not limited to warfare. The same technologies are also transforming robotics, aerospace, and AI-powered transportation. From self-driving cars to autonomous space exploration, AI-driven navigation is paving the way for a future where intelligent machines operate with remarkable precision and adaptability.

J. Kranthi Kiran
22761A1291

THE TECH EDGE

The Importance of Computer Hardware Knowledge for IT Students



In today's digital era, IT professionals are expected to have a deep understanding of both software and hardware. While software development and programming are often emphasized, the foundation of a successful IT career begins with a strong grasp of computer hardware.

From troubleshooting system failures to optimizing performance, hardware knowledge empowers students to diagnose and fix issues efficiently. Understanding components like processors, memory, and storage devices allows IT professionals to build high-performance systems tailored to specific needs.

At The Tech Edge, we believe that mastering hardware fundamentals is the key to becoming a well-rounded IT professional. By gaining hands-on experience with components and configurations, students develop problem-solving skills that are highly valued in the industry.

In the fast-paced world of technology, those who understand hardware will always have the edge. Stay informed, stay skilled, and equip yourself for success in IT.

By:-K.Somasekhara Karthikya
IT 3rd year(B)

Hygiene Matters

Small Habits,Big Impacts

04/11/23

The Critical Role oF Hygiene

The COVID-19 pandemic highlighted the undeniable importance oF hygiene in preventing the spread oF inFectious diseases. Simple practices like Frequent handwashing, wearing masks, and sanitizing surFaces became essential tools in controlling the virus's spread. In Fact, countries that adhered to strict hygiene protocols saw a signiFicant reduction in inFection rates. This served as a stark reminder that our daily hygiene habits are not just personal choices but key Factors in public health.

Real-liFe incidents, such as Foodborne outbreaks and the COVID-19 pandemic, highlight the importance oF hygiene in preventing the spread oF illness. Simple practices like handwashing and sanitizing can protect not only individual health but also the well-being oF communities. Poor hygiene in Food handling, For example, can lead to serious consequences like E. coli outbreaks. These incidents underscore that maintaining good hygiene is essential For both personal and public health, directly inFluencing our quality oF liFe.

S.Vikasini
22761A12B9

1. A Multi-level Optimized Strategy for Imbalanced Data Classification Based on SMOTE and AdaBoost, International Conference on Data Analytics & Management, volume 787, pp 223–238, ISBN:978-981-99-6550-2, https://doi.org/10.1007/978-981-99-6550-2_18

(20761A1242) YALLA SOWMYA REDDY
(20761A12B7) Y. MADHAVI REDDY
(20761A12C9) R. VIJAYA

2. Image Restoration Using ResNet–VGG Autoencoder Model, International Conference on Data Analytics & Management, volume 787, pp 195–204, ISBN:978-981-99-6550-2, https://doi.org/10.1007/978-981-99-6550-2_16

(19761A12A2) MULLANGI DAVID
(19761A1251) SHAIK ABDUL RIYAZ
(20765A1205) PEREPI DURGA TEJA

3. Automatic COVID Protocols-Based Human Entry Check System, International Conference on Frontiers of Intelligent Computing: Theory and Applications, volume 370, pp 49–63, ISBN:978-981-99-6702-5, https://doi.org/10.1007/978-981-99-6702-5_4

(20761A1276) CHINTHALAPUDI SIVA VARA PRASAD
(20761A12A1) OLETI PRATHYUSHA
(20761A1278) DUDDU SAI PRAVEEN KUMAR
(20761A1286) JANGAM SNEHA MADHURI

4. An Ensemble Deep Transfer Learning and SMOTE Model for Classification of Alzheimer's Disease, International Conference on Innovative Computing and Communications, Volume: 731, ISBN:978-981-99-4071-4, https://doi.org/10.1007/978-981-99-4071-4_54

(19761A1293) KETHE MANOJ KUMAR
(19761A12A5) NERELLA SAI SASANK
(19761A1226) MALLAREDDY ABHINAYA

5. The Ensemble Method for Intrusion Detection System Using Bagging–Autoencoder and PSO, International Conference on Innovative Computing and Communications, Volume: 731, ISBN:978-981-99-4071-4, https://doi.org/10.1007/978-981-99-4071-4_61

(19761A1212) DONTHIREDDY CHETANA VARSHA
(20765A1209) NERELLA VISHNU SAI
(19761A1224) KUKKADAPU LAKSHMI MEGHANA

6. Optimization of Users EV Charging Data Using Convolutional Neural Network**,** International Conference on Innovative Computing and Communications, Volume: 731, pp 683–698, ISBN: 978-981-99-4070-7. https://doi.org/10.1007/978-981-99-4071-4_53

(19761A1287) JAHNAVI REDDY GONDESI
(19761A1287) GONEPALLI SIVAKRISHNA
(20765A1203) ITELA ANIL KUMAR


FACULTY
ARTICLES

Consolidated data

SCI	ESCI	SCOPUS J	SCOPUS C	Open Access	Total	UGC	Books	Chapters	Patents
01	01	01	17	01	21		01	17	0

Articles Published in Reputed Journals & Conference by the Faculty of Information Technology

HMLF_CDD_SSBM: A Hybrid Machine Learning Framework for Cardiovascular Disease Diagnosis Prediction Using the SMOTE Stacking Method.

Satuluri Naganjaneyulu, Gurija Akanksha, Shaik Shaheeda & Mohammed Sadhak ,International Conference on Innovative Computing and Communications,Volume:537,*01-08-2023, pp 571–585, ISBN:978-981-99-3010-4,* https://doi.org/10.1007/978-981-99-3010-4_47

Nowadays, predicting the diagnosis of cardiovascular disease (CDD) is one of the critical challenges in the medical field. Every year, millions of people die from cardiovascular diseases, the majority of which are preventable if caught early (Conroy in Eur Heart J 24:987–1003, 2003; Hippisley-Cox in BMJ 336:1475–1482, 2008; Kremers et al. in Arthritis Rheum 58:2268–2274, 2008). To prevent such kind of diseases, effective early prediction techniques using artificial intelligence (AI) and machine learning (ML) techniques for CDD prediction are much demanded (Krittanawong et al. in J Am College Cardiol 69:2657–2664, 2017). Traditional AI and ML models, on the other hand, fail to predict data imbalance and lead to relatively prediction accuracy at minimal rates. Compared to individual classifier models, ensemble methods performed better. Moreover, most researchers are not concerned with the imbalance of classes in the CDD dataset; one of the good approaches is Synthetic Minority Over-sampling Technique (SMOTE) (Guo et al. in Proceedings of Chinese automation congress (CAC); Ge et al. in Proceedings of IEEE conference on energy internet and energy system integration (EI2)). Accuracy, precision, specificity, sensitivity, and the F1-measure are the parameters used to assess the prediction performance. The framework is validated using two benchmark datasets known as Framingham and Cleveland. The comparative results of the proposed framework for CDD, HMLF_CDD_SBSM outperform the existing state-of-the-art approaches. Moreover, it is concluded that HMLF_CDD_SBSM is a reliable framework suitable for early detection of cardiovascular disease.

Satuluri Naganjaneyulu,

A Novel Approach for Effective Classification of Brain Tumors Using Hybrid Deep Learning

Ananapareddy V. N. Reddy, A. Kavya, B. Rohith, B. Narasimha Rao & L. Harshada. International Conference on Innovative Computing and Communications, Volume:537, No. 05, pp 571–5857 ISBN:978-981-99-3010-4 https://doi.org/10.1007/978-981-99-3010-4_41

Brain tumor is an abnormal growth of unwanted cells in human brain. They can develop in any part of brain and can ultimately affect the human lifespan. Detection of brain tumors as early as possible is essential. Out of all available techniques, MRI has become very useful medical diagnostic tool in works related to brain tumor detection and classification. Data acquisition, preprocessing, segmentation, feature extraction, and classification is the work flow which we followed. BraTS2015 dataset is used, and firstly, an improved median filter is utilized to enhance the input MRI image. U-net architecture is used for image segmentation. Then, some major features which are based on loop, median binary pattern (MBP), and modified local Gabor directional pattern (LGDip) are extracted. We subsequently used a hybrid optimization technique, that is, blue monkey extended bald eagle optimization (BMEBEO). Our proposed model outperformed previously used techniques with maximal results.

Ananapareddy V. N. Reddy

An Innovative Software Engineering Approach to Machine Learning for Increasing the Effectiveness of Health Systems

*Ananapareddy V. N. Reddy, Mamidipaka Ramya Satyasri Prasanna, Arja Greeshma & Kommu Sujith Kumar.*International Conference on Innovative Computing and CommunicationsVolume:703,pp 207–223, ISBN978-981-99-3315-0, https://doi.org/10.1007/978-981-99-3315-0_17

By increasing diagnostic precision, lowering healthcare costs, and enabling tailored treatment regimens, there is potential for machine learning to revolutionize the healthcare sector. Realizing the full potential of artificial intelligence in healthcare requires finally adoption of cutting-edge software engineering methodologies. This review of the literature looks at the present status of software engineering and healthcare practices in the area of machine learning. It also covers cutting-edge software engineering methodologies for machine learning and their successful application through case studies and real-world examples. The poll also outlines potential adoption hurdles and future initiatives. The conclusion underlines the importance of continued research and development in this area in order to fully realize machine learning's promise to increase the efficiency of healthcare systems and boost patient outcomes.

Ananapareddy V. N. Reddy

Optimal and Virtual Multiplexer Resource Provisioning in Multiple Cloud Service Provider System

Phaneendra Kanakamedala, M. Babu Reddy, G. Dinesh Kumar, M. Srinivasa Sesha Sai & P. Ashok International Conference on Innovative Computing and Communications Volume:537, pp 587–597 – 1077 ISBN:978-981-99-3010-4 , https://doi.org/10.1007/978-981-99-3010-4_48.

In today's digital world, user needs have been diversified in accessing the resources to solve the computing problems. In cloud computing, resource provisioning allocates the resources based on user requirements. Dynamic resource allocation distributes load among virtual machines (VMs). There is an uncertainty in demand for the resources, and resource price must be considered in provisioning VMs. Cloud infrastructure providers are providing a wide range of computing services with different pricing models based on the VM instance types required by the users. Identifying the adaptable resources for the required applications is an optimization problem that can be addressed through provisioning of resources at the offered price. Therefore, there is a need to develop a prediction-based resource management for unpredictable resource demands in terms of both cost and performance. However, we are proposing a multi-cloud broking system that manages the utilization of resources and optimize the cost of resource provisioning and delivery of cloud services cost effectively using stochastic programming and linear regression. It aims to maximize performance and minimize the cost of utilizing the resource. The developed stochastic-based resource provisioning prediction management (SRPPM) increases the performance which is based on linear regression and used to compare the proposed approach optimal and virtual multiplexer resource provisioning (OVMRP). So, based on SRPPM, the proposed OVMRP approach uses linear regression for resource prediction, applies multiplexing on the pool of VMs based on the capacity of VMs, and uses Bayesian theorem to find the least cost VM based on their workload characteristics. The evaluation result shows the proposed algorithm OVRPM accomplishes better performance than the other existing ones.

Phaneendra Kanakamedala

Diabetic Retinopathy Detection Using Deep CNN Architecture and Medical Prescription

Rajasekhar Kommaraju, Nallamotu Haritha, Patibandla Yugala, Mukkera Pushpa & Sanikommu Yaswanth International Conference on Innovative Computing and Communications Volume:537 pp 587–597 ISBN:978-981-99-3010-4, https://doi.org/10.1007/978-981-99-3010-4_48

In today's digital world, user needs have been diversified in accessing the resources to solve the computing problems. In cloud computing, resource provisioning allocates the resources based on user requirements. Dynamic resource allocation distributes load among virtual machines (VMs). There is an uncertainty in demand for the resources, and resource price must be considered in provisioning VMs. Cloud infrastructure providers are providing a wide range of computing services with different pricing models based on the VM instance types required by the users. Identifying the adaptable resources for the required applications is an optimization problem that can be addressed through provisioning of resources at the offered price. Therefore, there is a need to develop a prediction-based resource management for unpredictable resource demands in terms of both cost and performance. However, we are proposing a multi-cloud broking system that manages the utilization of resources and optimize the cost of resource provisioning and delivery of cloud services cost effectively using stochastic programming and linear regression. It aims to maximize performance and minimize the cost of utilizing the resource. So, based on SRPPM, the proposed OVMRP approach uses linear regression for resource prediction, applies multiplexing on the pool of VMs based on the capacity of VMs, and uses Bayesian theorem to find the least cost VM based on their workload characteristics. The evaluation result shows the proposed algorithm OVRPM accomplishes better performance than the other existing ones..

Rajasekhar Kommaraju

IPSO-SMOTE-AdaBoost: An Optimized Class Imbalance Strategy Using Boosting and PSO Techniques

Sarvani Anandarao, Polani Veenadhari, Gudivada Sai Priya & Ginjupalli Raviteja , International Conference on Innovative Computing and Communications Volume:537 pp 555–569 ISBN978-981-99-3315-0, https://doi.org/10.1007/978-981-99-3010-4_46

The class imbalance is challenging issue in machine learning and data mining especially health care, telecom sector, agriculture sector, and many more (Zhu et al. in Pattern Recogn Lett 133:217–223, 2020; Thabtah et al. in Inf Sci 513:429–441, 2020). Imbalance of data samples across classes can arise as a result of human error, improper/unguided data

sample selection, and so on (Tarekegn et al. in Pattern Recogn 118:107965, 2021). However, it is observed that applying imbalanced datasets to the data mining and machine learning approaches, it retains the biased in results which leads to the poor decision-making (Barella et al. in Inf Sci 553:83–109, 2021; Zhang et al. in ISA Trans 119:152–171, 2021; Ahmed and Green in Mach Learn Appl 9:100361, 2022). The primary motivation for this research is to explore and develop novel ensemble approaches for dealing with class imbalance and efficient way of retrieving synthetic data. in J Electron Inf Technol 38:373–380, 2016), and AdaBoost. AdaBoost combined with SMOTE provides an optimal set of synthetic samples, thereby modifying the updating weights and adjusting for skewed distributions. With the proposed ensemble framework, IPSO-SMOTE-AdaBoost, parameters can be re-initialized to counter the concept of local optimum as well with the SMOTE that is boosted with AdaBoost method. The proposed method is validated using three datasets on six classifiers: extra tree (ET), naive Bayes (NB), random forest (RF), support vector machine (SVM), decision tree (DT), and K-nearest neighbor (KNN). After that, the IPSO-SMOTE-AdaBoost is compared to the existing SMOTE-PSO. The evaluation of proposed work is done with measures, namely accuracy, precision, recall, sensitivity, and F-score, and result shows that the proposed technique outperformed the usual PSO and SMOTE variations.

Sarvani Anandarao

Plant Disease Detection Using Fine-Tuned ResNet Architecture

Jalluri Geetha Renuka, Goberu Likhitha, Vamsi Krishna Modala & Duggi Manikanta Reddy International Conference on Innovative Computing and Communications Volume:537 pp 527–541 ISBN978-981-99-3315-0,https://doi.org/10.1007/978-981-99-3010-4_44

Agriculture is vital for human survival as it provides the food, fiber and other essential resources needed for a growing population. It holds a crucial significance in advancing rural advancement, fostering economic growth, and promoting environmental sustainability. Lack of knowledge about plant diseases and proper use of pesticides can lead to crop loss, decreased yield and financial loss for farmers. It also can lead to overuse of pesticides, which can harm the environment and potentially harm human health. A modern solution using deep learning algorithms to detect plant diseases and suggest appropriate pesticides can greatly benefit farmers by improving crop yields, reducing pesticide usage and increasing profits.. We leveraged the “Plant Village Dataset” dataset available on Kaggle to develop and evaluate the performance of our model for plant disease detection from images of plant leaves. We employed the augmentation technique to enhance the dataset and trained the model using the augmented images. Our model achieved accuracy of 99.68%

Jalluri Geetha Renuka

Brain Disorder Classification Using Deep Belief Networks

Rehana Begum, Ravula Vaishnavi, Kalyan Rayapureddy & Gelli Sai Sudheshna International Conference on Innovative Computing and Communications Volume:703 pp 183–195 ISBN978-981-99-3315-0. https://doi.org/10.1007/978-981-99-3315-0_15

Brain disorder classification is an important task in evaluating disorders and making treatment decisions. There are numerous imaging techniques used to detect brain disorders. In that MRI (Magnetic Reasoning Images) is commonly used for segmentation and detection of brain disorders, it plays an important role in medical treatment. In this chapter, the brain disorder can be done in four stages: preprocessing and segmentation, feature extraction, feature reduction, and classification. Using a discrete wavelet transformation, the features on the preprocessed image were extracted in the second stage (DWT). Deep Learning (DL) is a subfield of machine learning that has demonstrated incredible performance, particularly in classification and segmentation problems. We must use Deep Belief Network in this chapter (DBN) for classification of different brain disorder types.

Rehana Begum

Detection of Phishing Website Using Support Vector Machine and Light Gradient Boosting Machine Learning Algorithms

V. V. Krishna Reddy, Yarramneni Nikhil Sai, Tananki Keerthi & Karnati Ajendra Reddy International Conference on Innovative Computing and Communications Volume:731 pp 285–296 ISBN:978-981-99-4070-7. https://doi.org/10.1007/978-981-99-4071-4_22

Phishing is one of the most popular and hazardous cybercrime attacks. These attacks are designed to steal information used by people and companies to complete transactions. Phishing websites use a variety of indicators in their text and web browser-based data. This research presents a novel approach to classifying phishing websites by making use of the extreme learning machine (ELM). In this study, SVM, light GBM algorithm was used to detect phishing websites according to characteristics such as the length of their URLs, the number of capital letters they include and the presence of HTML elements. The findings indicate that ELM has a classification accuracy of 94.2% when it comes to phishing websites. This demonstrates the potential of ELM to classify websites that are used for phishing and to improve the safety of users who do their activities online.

V. V. Krishna Reddy

Predicting Autism Spectrum Disorder Using Various Machine Learning Techniques

Gurram Rajendra, Sunkara Sai Kumar, Maddi Kreshnaa & Mallireddy Surya Tejaswini International Conference on Innovative Computing and Communications Volume:731 pp 285–296 ISBN:978-981-99-4070-7 https://doi.org/10.1007/978-981-99-4071-4_22

A neurological disorder referred to as ASD autism spectrum disorder exists that may slow down speaking, linguistic abilities interpersonal skills. The symptoms typically occur within the initial period. Although ASD is mostly brought on by hereditary and external factors, it can occur from the time after newborn. Through the development phase, it can impact roughly one in every hundred people worldwide. Early detection and treatment can result in improvement; unfortunately, most kids with ASD do not acquire an accurate diagnosis and usually miss the opportunity for treatment; guardians may be hesitant to accept their child's psychological progression which differs from one's own physical growth. The delay in diagnosis prevents a toddler from receiving the necessary support and care to reach their full potential; at present, clinical standardised tests are the only available methods for diagnosing ASD. But they are time consuming, and costly efforts are underway to improve traditional procedures. Researchers have used approaches like support vector machines (SVM) and random forest classification methods (RFC) to build predictive model in order to enhance efficiency and accuracy. The study's aim is to identify a child's vulnerability to ASD within the early phases aiding with early diagnosis. The study employed a systematic methodology to assess patient data over the previous 10 years who had disorder and non-chemical abnormalities. Findings demonstrate the effectiveness of using SVM and RFC, the RFC achieving 100% accuracies for all datasets. Early detection of ASD is crucial as larger amounts of information and testing can result in an increased accuracy for AI-assisted autism spectrum disorder which performs the exceptional among three arrangements for ordering ASD details.

Gurram Rajendra

An Effective Methodology to Forecast the Progression of Liver Disease and Its Stages Using Ensemble Technique.

Raviteja Kamarajugadda, Priya Darshini Rayala, Gnaneswar Sai Gunti & Dharma Teja Vegineti International Conference on Innovative Computing and Communications Volume:731 pp 285–296 ISBN:978-981-99-4070-7, https://doi.org/10.1007/978-981-99-4071-4_

Liver disease is one of the deadliest illnesses in the world. It takes place in the human body, particularly in the liver. The liver filters all of the blood present in the body and detoxicates harmful substances such as alcohol and drugs. Finding the origin and severity of liver disease is crucial for an effective treatment. The risk of liver disease can be predicted using various machine learning algorithms. We created a system that requests users submit the specifics of their blood test report based on the precise model. The system then uses the most precise model that has been trained to forecast whether or not a person is at risk for liver disease. Data preparation, data pre-processing, feature selection, classification, and building a model is the work flow which we followed. Indian_liver_patients and cirrhosis datasets are used. Mean, median, and standard deviation calculations are performed to enhance the input text data. The datasets consist of numerical and categorical data which is further pre-processed to remove the categorical and noise present within the dataset. Some unwanted features are eliminated using feature selection. With the aid of machine learning classification methods like Random Forest, Support Vector Machine, K-NN and Naive Bayes, liver illness can be detected early. The proposed work is an ensemble technique to predict the liver disease and its stages with higher accuracy when compared with individual classification techniques. Here we propose the combination of Random Forest, AdaBoost and GradientBoost classifiers. Concurrently, we use RandomizedSearchCV and GridSearchCV which are two effective ways that tune the parameters to increase the model generalizability. The performance metrics we considered are accuracy, precision, recall and F1-score.

Raviteja Kamarajugadda

Integrated Dual LSTM Model-Based Air Quality Prediction

Rajesh Reddy Muley, Vadlamudi Teja Sai Sri, Kuntamukkala Kiran Kumar & Kakumanu Manoj Kumar International Conference on Innovative Computing and Communications Volume:731 pp 715–729 ISBN:978-981-99-4070-7, https://doi.org/10.1007/978-981-99-4071-4_55

Although air quality prediction is a crucial tool for weather forecasting and air quality management, algorithms for making predictions that are based on a single model are prone to overfitting. In order to address the complexity of air quality prediction, a

prediction approach based on integrated dual long short-term memory (LSTM) models was developed in this study. The model takes into account the variables that affect air quality such as nearby station data and weather information. Finally, two models are integrated using the eXtreme Gradient Boosting (XGBoosting) tree. The ultimate results of the prediction may be obtained by summing the predicted values of the ideal subtree nodes. The proposed method was tested and examined using five evaluation techniques. The accuracy of the prediction data in our model has significantly increased when compared with other models.

Rajesh Reddy Muley

Optimization of Users EV Charging Data Using Convolutional Neural Network

M. Vijay Kumar, Jahnavi Reddy Gondesi, Gonepalli Siva Krishna & Itela Anil Kumar International Conference on Innovative Computing and Communications Volume:731 pp 683–698 ISBN:978-981-99-4070-7, https://doi.org/10.1007/978-981-99-4071-4_53

Transportation is necessary for modern living, yet the conventional combustion engine is quickly going out of style. All electric vehicles are quickly replacing gasoline and diesel vehicles because they create less pollution. The environment is greatly improved by fully electric vehicles (EVs), which produce no exhaust pollutants. Using modelling and optimization, researchers have concentrated on building smart scheduling algorithms to control the demand for public charging. To develop better forecasts, consider aspects such as prior historical data, start time, departure time, charge time hours, weekday, platform, and location id. Previous research has used algorithms like SVM and XGBOOST, with session time and energy usage receiving SMAPE ratings of 9.9% and 11.6%, respectively. The classifier model in the suggested method which makes use of CNN sequential architecture achieves the best prediction performance as a consequence. We emphasize the importance of charging behaviour predictions in both forecasts relative to one another and demonstrate a notable advancement over earlier work on a different dataset. Using various lengths of training data, we assess the behaviour prediction performance for increasing charge duration levels and charging time slots in contrast to prior work. The performance of the proposed technique is verified using actual EV charging data, and a comparison with other machine learning algorithms shows that it generally has higher prediction accuracy across all resolutions.

M. Vijay Kumar

Decision Support Predictive Model for Prognosis of Diabetes Using PSO-Based Ensemble Learning

Saddi Jyothi, Addepalli Bhavana, Kolusu Haritha & Tumu Navya Chandrika International Conference on Innovative Computing and Communications Volume:731 pp 309–323 ISBN:978-981-99-4070-7, https://doi.org/10.1007/978-981-99-4071-4_24

The decision support predictive model for diabetes diagnosis is a valuable tool that can help healthcare professionals accurately predict diabetes outcomes and deliver the finest possible treatment to their patients. The main research purpose is to detect and classify the diabetes image by utilizing an ensemble learning method. The system uses a combination of techniques for feature selection and classification to detect the presence of diabetes, and we used SMOTE analysis to balance data from imbalanced data. The feature selection technique is used to identify the relevant factors that are associated with diabetes with the help of PSO. The model's performance is assessed utilizing measures like accuracy, recall, and F1-score. Results demonstrate the feasibility of recommended system in predicting a diabetes presence. The suggested system can be used as an effective decision support tool for early diagnosis and treatment of diabetes.

Saddi Jyothi

EL-ID-BID: Ensemble Stacking-Based Intruder Detection in BoT-IoT Data

Cheruku Poorna Venkata Srinivasa Rao, Rudrarapu Bhavani, Narala Indhumathi & Gedela Raviteja International Conference on Innovative Computing and Communications Volume:731 pp 821–836 ISBN:978-981-99-4070-7, https://doi.org/10.1007/978-981-99-4071-4_62

The Internet of Things continues to grow in size, connection, and applicability. Just like other new technologies, this ecosystem affects every area of our daily existence (Kafle et al. in IEEE Commun Mag 54:43–49, 2016). Despite the many advantages of the Internet of Things (IoT), the importance of securing its expanded attack surface has never been higher. There has been a recent increase in reports of botnet threats moving into the Internet of Things (IoT) environment. As a result, finding effective methods to secure IoT systems is a critical and challenging area of study. Potentially useful alternatives include methods based on machine learning, which can identify suspicious activities and even uncover network attacks. Simply relying on one machine learning strategy may lead to inaccuracies in data collection, processing, and representation if applied in practice. This research uses stacked ensemble learning to detect attacks better than conventional learning, which uses one algorithm for intruder detection (ID). To evaluate how well the stacked ensemble system performs in comparison to other common machine learning

algorithms like Decision Tree (DT), random forest (RF), Naive Bayes (NB), and support vector machine (SVM), the BoT-IoT benchmark dataset has been used. Based on the findings of the experiments, stacked ensemble learning is the best method for classifying attacks currently available. Our experimental outcomes were assessed for validation data set, accuracy, precision, recall, and F1-score. Our results were competitive with best accuracy and ROC values when benchmarked against existing research.

Cheruku Poorna Venkata Srinivasa Rao

A Customer Churn Prediction Using CSL-Based Analysis for ML Algorithms: The Case of Telecom Sector

Kampa Lavanya, Juluru Jahnavi Sai Aasritha, Mohan Krishna Garnepudi & Vamsi Krishna Chellu International Conference on Innovative Computing and Communications volume 731 26-10-2023 pp 789–804 978-981-99-4071-4, https://doi.org/10.1007/978-981-99-4071-4_60

The loss of customers is a serious issue that needs to be addressed by all major businesses. Companies, especially in the telecommunications industry, are trying to find ways to predict customer churn because of the direct impact on revenue. Therefore, it is important to identify the causes of customer churn to take measures to decrease it. Customer churn occurs when a company loses customers because of factors such as the introduction of new offerings by rivals or disruptions in service. Under these circumstances, customers often decide to end their subscription. Predicting the likelihood of a customer defecting by analyzing their past actions, current circumstances, and demographic data is the focus of customer churn predictive modeling. Predicting customer churn is a well-studied problem in the fields of data mining and machine learning. A common method for dealing with this issue is to employ classification algorithms to study the behaviors of both churners and non-churners. However, the current state-of-the-art classification algorithms are not well aligned with commercial goals because the training and evaluation phases of the models do not account for the actual financial costs and benefits. Different types of misclassification errors have different costs, so cost-sensitive learning (CSL) methods for learning on data have been proposed over the years. In this work, we present the CSL version of various machine learning methods for Telecom Customer Churn Predictive Model. Furthermore, also adopted feature selection strategies along with CSL in real-time telecom dataset from the UCI repository. The proposed combination of CSL with ML, the results outperforms the state-of-the-art machine learning techniques in terms of prediction accuracy, precision, sensitivity, area under the ROC curve, and F1-score.

Kampa Lavanya

AD-ResNet50: An Ensemble Deep Transfer Learning and SMOTE Model for Classification of Alzheimer's Disease

M. Likhita, Kethe Manoj Kumar, Nerella Sai Sasank & Mallareddy Abhinaya International Conference on Innovative Computing and Communications volume 731 pp 805–820 ISBN: 978-981-99-4071-4, https://doi.org/10.1007/978-981-99-4071-4_61

Today, one of the emerging challenges faced by neurologists is to categorize Alzheimer's disease (AD). It is a type of neurodegenerative disorder and leads to progressive mental loss and is known as Alzheimer's disease (AD) (Tanveer et al. in Commun Appl 16:1–35, 2020). An immediate diagnosis of Alzheimer's disease is one of the requirements and developing an effective treatment strategy and stopping the disease's progression. Resonance magnetic imaging (MRI) and CT scans can enable local changes in brain structure and quantify disease-related damage. The standard machine learning algorithms are designed to detect AD to have poor performance because they were trained using insufficient sample data. In comparison with traditional machine learning algorithms, deep learning models have shown superior performance in most of the research studies stated specific to diagnosis of AD. One of the elegant DL method is the convolutional neural network (CNN) and has helped to assist the early diagnosis of AD (Sethi et al. in BioMed Research International, 2022; Islam and Zhang in Proceedings IEEE/CVF 841 conference computing vision pattern recognition workshops (CVPRW), pp 1881–1883, 2018). However, in recent days advanced DL methods have also attempted for classification of AD, especially in MRI images (Tiwari et al. in Int J Nanomed 14:5541, 2019). The purpose of this paper is to propose a ResNet50 model for Alzheimer's disease, namely AD-ResNet50 for MRI images that incorporates two extensions known as transfer learning and SMOTE. This research uses the proposed method and compares it with the standard deep models VGG19, InceptionResNet V2, and DenseNet169 with transfer learning and SMOTE (Chawla et al. in J Artif Intell Res 16:(1)321–357, 2002). The results demonstrate the efficiency of the proposed method, which outperforms the other three models tested. When compared with baseline deep learning models, the proposed model outperformed them in terms of accuracy and ROC values.

M. Likhita

Automatic COVID Protocols-Based Human Entry Check System

Annapareddy V. N. Reddy, Chinthalapudi Siva Vara Prasad, Oleti Prathyusha, Duddu Sai Praveen Kumar & Jangam Sneha International Conference on Frontiers of Intelligent Computing: Theory and Applications volume 370 pp 49–63 ISBN:978-981-99-6702-5 , https://doi.org/10.1007/978-981-99-6702-5_4

Many people locate themselves getting succumbed to the ailment by using no longer following the same old operating methods (SOPs) positioned forth by the government. The

number one safety measures consist of carrying face masks properly, washing fingers with hand sanitizers regularly, and maintaining social distancing. So, the number one perspective of the venture is to screen people in making them comply with protection precautions in crowded locations by detecting face masks on their faces, checking the temperature, and spraying the sanitizer, with video monitoring at the show and accumulating the masks facts as well. Considering the situation in crowded locations like hospitals, department shops, temples, movie theatres, ATMs, and many others. With this, human intervention can be minimized at the doorway for checking precautions; the system detects the face and temperature of a human and sprays sanitizer, if the individual is taking each precaution the door which is related to the gadget will open and let the character move and if either of the precautions had been now not observed the door will no longer open and the photo of the character may be captured and the reveal display the temperature..

Annapareddy V. N. Reddy

Image Restoration Using ResNet–VGG Autoencoder Model

K. Venu Gopal, Mullangi David, Shaik Abdul Riyaz & Perepi Durga Teja International Conference on Data Analytics & Management volume 787 pp 195–204 ISBN:978-981-99-6550-2 *https://doi.org/10.1007/978-981-99-6550-2_16*

Image degradation is a problem that frequently arises in computer vision. Several types of degradation, such as noise, blur, and haze, can significantly impact the image's quality and make it challenging to analyze. For example, haze, where light is scattered by the environment and lowers contrast and color saturation, is a prevalent issue with outdoor photos. Dehazing techniques have been created to solve this issue, to remove the haze from photos and regain their original quality. Conventional dehazing techniques frequently rely on improvised elements and presumptions regarding the scene, which might restrict their efficacy. Convolutional neural networks (CNNs) are trained on big datasets, and deep learning-based techniques have recently demonstrated promising results in dehazing to understand the fundamental connections between unclear and clear visuals. Dehazing algorithms can perform better since they can automatically pick up more complicated features and adapt to various scenarios when employing CNNs. This abstract emphasizes the need for deep learning-based dehazing in this situation since it provides a more reliable and accurate means of restoring damaged photos than more conventional ones. Moreover, deep learning-based dehazing algorithms can be used in a variety of applications, including autonomous driving, surveillance, and remote sensing, where the accuracy of analyses and decisions depends on the quality of the images.

K. Venu Gopal

A Multi-level Optimized Strategy for Imbalanced Data Classification Based on SMOTE and AdaBoost

A. Sarvani, Yalla Sowmya Reddy, Y. Madhavi Reddy, R. Vijaya & Kampa Lavanya International Conference on Data Analytics & Management volume 787 pp 223–238 ISBN, 978-981-99-6550-2 , https://doi.org/10.1007/978-981-99-6550-2_18 ,

Many applications require effective classification of imbalanced data, which is found everywhere. Existing classification algorithms often misclassify the minority class in imbalanced data due to the dominant class's influence. Boosting algorithms combine basic learners to improve their performance. AdaBoost, a popular ensemble learning system, can classify general datasets well. But this algorithm will be limited misclassified samples only. The minority-classified samples are not fit for this algorithm and as it alone not readies for imbalanced data classification. This paper introduced multi-level strategy to solve imbalanced data, where combined SMOTE with AdaBoost to process unbalanced data. AdaBoost and SMOTE optimize synthetic samples, implicitly modifying update weights and adjusting for skewed distributions. The typical AdaBoost technique uses too many system resources to prevent redundant or useless weak classifiers. To make process simple applied Adaptive PSO (APSO) to the SMOTE_AdaBoost results re-initialize of strategy to the optimize AdaBoost weak classifier coefficients. Four real imbalanced datasets on six classifiers—Naïve Bayes (NB), Random Forest (RF), Multi-layer Perception (MLP), Decision Tree (DT), and K-Nearest Neighbor (KNN)—verify the proposed multi-level strategy. The proposed strategy (APSO_SMOTE_AdaBoost) is applied to six classifiers' and compared to SMOTE-PSO. The multi-level proposed strategy outperforms with standard approach in accuracy, precision, recall, sensitivity, and F-score..

Sarvani Anandarao

Enhancing stock market forecasting using sequential training network empowered by tunicate swarm optimization

Kalva Sudhakar,Satuluri Naganjaneyulu Multimedia Tools and pplications pp:1-24 ISSN,1380-7501 Enhancing stock market forecasting using sequential training network empowered by tunicate swarm optimization | Multimedia Tools and Applications (springer.com)

Owing to the dynamic nature of the financial industry, determining accurate stock market forecasts remains a significant challenge. Traditional forecasting methods often struggle to capture the intricate and volatile dynamics of stock price movements. Similarly numerous

strategies for stock market prediction have been presented, precise prediction in this field still requires attention. Based on this insight, a novel sequential training model is proposed by adopting the optimal feature selection procedure. In order to determine stock price predictions, primarily financial Nifty data is obtained from the corresponding source. After acquiring financial data, the feature extraction phase is used to extract features from fundamental analysis, such as the Relative Strength Index, Rate of Change, Average True Range, and Exponential Moving Average. Additionally, statistical characteristics such as mean, standard deviation, variance, skewness, and kurtosis are derived from the stock market data. In order to select parameters, the fitness dependent randomised tunicate swarm optimization technique is utilized after the features have been retrieved. Feature selection improves the deep learning process and increases prediction capability by selecting the most important variables and eliminating irrelevant features. A novel sequential training technique is introduced aimed at forecasting stock market trends by leveraging the chosen features. The suggested approach undergoes comprehensive testing, evaluating its predictive capability using accuracy, precision, and recall metrics, implemented towards enhancing future stock price forecasts.

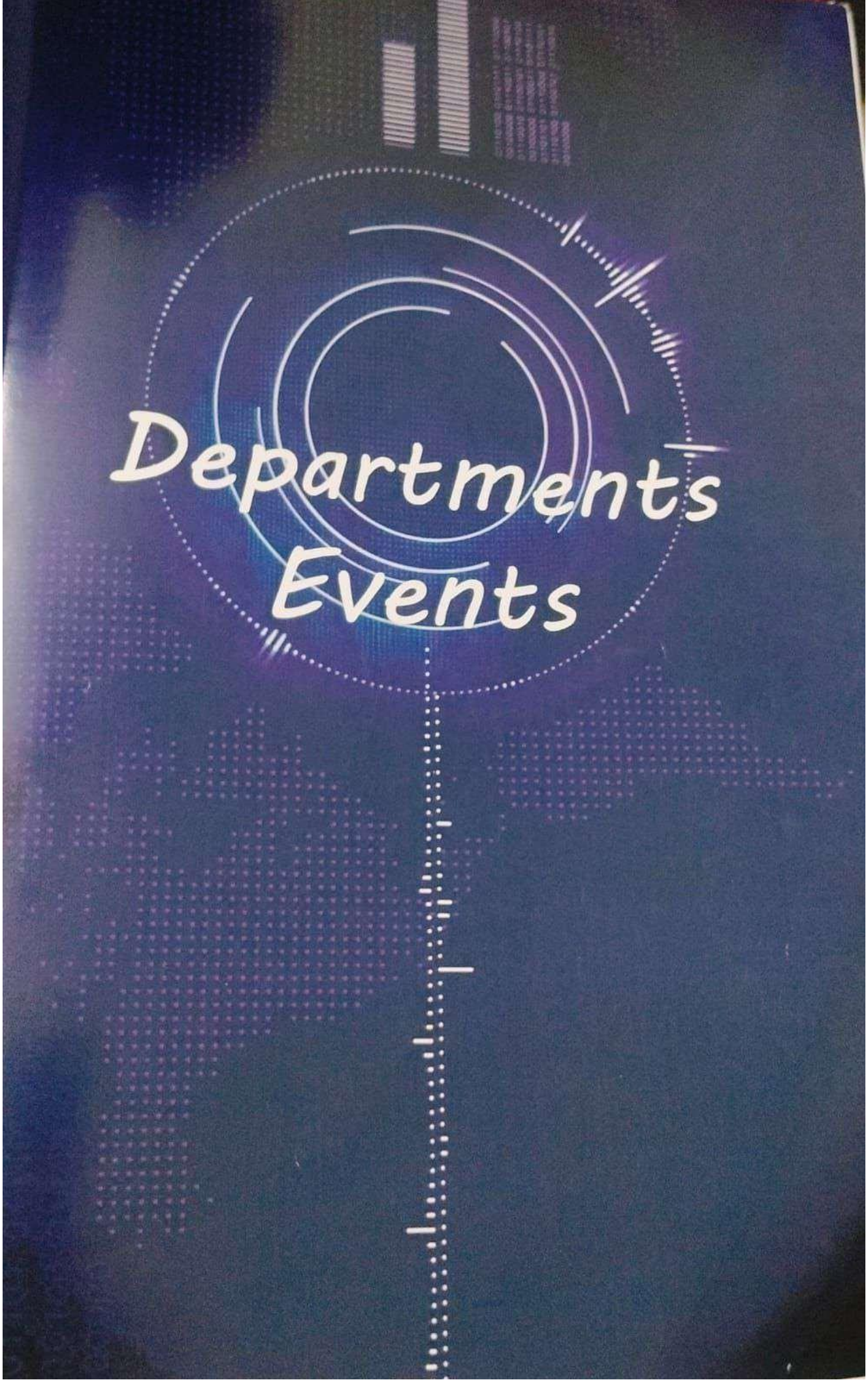
Dr. Satuluri Naganjaneyulu

R& D publications for the A:Y 2023-24

SCI	ESCI	SCOPUS J	SCOPUS C	Open Access	Total	UGC	Books	Chapters	Patents
01	01	01	23	01	20	02	01	23	01

DETAILS OF PATENTS:

Title of the Patent	Names of all the Applicants as per order (Bold our faculty)	Either LBRCE Applicant or not ?	Patent Reference No.	Date of the Patent filed	Date of the Patent Published	Status (Published/ Granted/ Commercialized)	Indian or foreign patent
A COMPUTATIONAL METHOD FOR BRAIN TUMOR CLASSIFICATION USING HYBRID DEEP INTELLIGENCE MODEL ON MRI IMAGES	**Dr. Annapareddy V N Reddy, Dr.Phaneendra Kanakamedala, Dr.Buraga Srinivasa Rao, Rajasekhar Kommaraju, Dr.Satuluri Naganjaneyulu CH Sambasivarao, Raviteja Kamarajugadda, Dr. Y. Vijay Bhaskar Reddy**	YES	202341073772 A	30/10/2023	15/12/2023	Published	Indian


Departments
Events

Consolidated data

S.NO	Department Event
1	Two Weeks Training Programme to Govt. School Teachrers on IFP'S, SMART TV & BYJU'S Content
2	Value Added Course on Web Application Development
3	A Five Day Workshop on Internet of Things and Machine Learning

"Two Weeks Training Programme to Govt. School Teachrers on IFP'S, SMART TV & BYJU'S Content"

EventType : 2-week training program to Government School Teachers

Dates : 03-07-2023 to 13-07-2023

Venues : 1F12, 1F13, Block-1, 1S13, Block-2,CSE Dept, LBRCE

Resource Person : Mr.M.Vijay Kumar, Sr.Assistant Professor, Department of IT.
Mr. Gopi Suresh.A, Sr.Assistant Professor, Department of CSE.

Name of The Coordinators : Dr.B.Srinivasa Rao, Head& Professor, Dept. of IT.
Dr.D.Veeraiah, Head& Professor, Dept of CSE

Govt Volunteer : MEO Mylavaram - Balu garu

Target Audience: Govt. School Teachers from A.Konduru Mandal and Reddigudm Mandal, NTR District,AP

Total no of Participants: 320

Objective of the Event:

The main objective of training program is that

1. Govt. of Andhra Pradesh in association with Department of school education and Department of higher education[APSCHE] designed this program such a way that 2-faculty from CSE Department has been trained on above digital equipment on 26-05-2023 at Andhra Loyola College, Vijayawada.
2. Trained faculty has to train nearly 320 Govt. School Teachers from A.Konduru Mandal and Reddigidem Mandal
3. Training was conducted in Batch wise for total of 8-Batches. and each batch consists of maximum of 40 Teachers.
4. Each batch attended 2 days training program. Each day , 4 sessions and total of 8- sessions were conducted where activities like

Batch-1, Batch-2, Batch-3, Batch-4, Batch-5, Batch-6, Batch-7, Batch-8	Day1	Session1:	Registration, Pre test, IFPs AIM and OBJECTIVES
		Session2:	usage of White Board in IFP
		Session3:	Different options in IFP
		Session4:	Android Box connected to IFP and INSTALATION
	Day2	Session1:	creating batches for hands on to teacher
		Session2:	hands on to teacher
		Session3:	BYJU'S TABS ERROR SOLUTION
		Session4:	INTERACTION AND CLOSING

Outcome of the Event :

On completion of this Training teachers can be able to:

- Understand IFP panel utilization in teaching practice
- IFP usage and hands on practice
- Android Box installation procedure
- Byju's tab error rectification and tab usage

Description of the Event:

Resource Persons Mr.M. Vijay Kumar and Mr.Gopi Surseh covered about how to use Interactive Flat Panels in govt. schools and their advantages like time saving and easy mode of operation on IFPs. Installation of Android boxes and Byju's content access on digital platform. Batches and their corresponding dates were given in the below table.

Batch-1	Batch-2	Batch-3	Batch-4	Batch-5	Batch-6	Batch-7	Batch-8
03-07-23 to 04-07-23	03-07-23 to 04-07-23	03-07-23 to 04-07-23	05-07-23 to 06-07-23	05-07-23 to 06-07-23	10-07-23 to 11-07-23	10-07-23 to 11-07-23	12-07-23 to 13-07-23

Impact Analysis:

- Teachers are motivated for using IFPs
- Teachers are Interacted with Interactive Flat panels and learn the use of IFP
- Teachers are having hands on sessions for android boxes installation
- Teachers are having hands on sessions for Byju's content usage

Feedback/Suggestions:

- Teachers thoroughly enjoyed the training program.
- By attending this training program, they are very confident that they can use the IFPs, Byju's Tabs and Smart TVs for educating the children's in their respective schools.


TWO WEEK TRAINING
PROGRAMME TO
SCHOOL TEACHERS ON
GPS, SMART TV & BYJU'S Content
GPS Map Camera
Mylavaram,AP,India
College Road, Mylavaram, Mylavaram, 521230, AP, India
Lat 16.748409, Long 80.634321
07/03/2023 11:35 AM GMT+05:30
Note : Captured by GPS Map Camera


GPS Map Camera
Mylavaram,AP,India
College Road, Mylavaram, Mylavaram, 521230, AP, India
Lat 16.748427, Long 80.634364
07/03/2023 11:35 AM GMT+05:30
Note : Captured by GPS Map Camera

Report on "Value Added Course on Web Application Development"

Type of Event: Workshop

Date/ Duration: **16-08-2023 to 19-08-2023** / 4 Days

Resource Person(s): Mr. Jagadeesh, Wipro Limited

Name of the Coordinator(s): **Dr. B Srinivasa Rao, Dept of IT**
Mr. Ravi Teja, Dept of IT
Mrs. Sarvani, Dept of IT
Mrs. Geeta Renuka, Dept of IT
Mrs. D. Vijaya Sree, Dept of IT

Target Audience: **II Year** B.Tech Students of IT.

Total no of Participants: **82**

Objective of the event:

The Department of Information Technology, LBRCE, has organized a value added course on Web Application Development such as HTML,CSS for a duration of 04 days i.e., from 16-08-2023 to 19-08-2023, The second year students are the target audience. The main objective of this event is to introduce these students to the concepts of Web Application development. Theprogram was inaugurated by Dr. B Srinivasarao, HOD, Dept. of IT and Dr. S. Naganjaneyulu,Dept. of IT, LBRCE. The core objective of this workshop is to train the students to build websites of different kinds such as a school fee payment and producing bill in online, shoppingwebsite, etc. Since this is an session on Web Application Development (Frontend Development) which are attended by second year students.

Schedule of the event: Day wise schedule was given below and each and every day the relatedconcepts are applied through conducting practical implementation sessions.

Day-1: Basic Introduction to Web development and HTML

- Explained about the working of a Web page
- Explained the Basics of HTML
- Explained about the compiling of the HTML code
- Elucidated the difference between frontend and backend
- Elaborated some basic tags used in HTML

Day-2: Extended the Explanation of HTML

- Adding the images to the web page
- Explained about the table creation
- Explained about the creation and styling of forms

- Adding Internal CSS
- Gave some simple tasks for students to create Time Table and forms

Day-3: Introduction to Intermediate CSS

- Explained about types of CSS
- Explained about the text and padding properties
- Elucidated about the margins and layouts and color pallets
- Explained about styling of tables using CSS and explained about fonts, icons
- Gave a task to create Banners

Day-4: Advanced CSS and Projects

- Explained about different types of layouts
- Elucidated the difference between the Grid and Flex
- Helped to the insertion of images in grid and flex
- Given the tasks of making faculty profile using different types of layouts
- Given a simple tasks of making various university home pages

Feedback/ suggestions

1. Successfully learnt about the basics of Web Pages. Developing web pages of their ownusing HTML and CSS

2. The number of practice hours could be more.

3. Successfully learnt concepts of various commands used in HTML and CSS

4. The lab is very interactive and made the students to learn a lot.

Photographs:

Report on "A Five Day Workshop on Internet of Things and Machine Learning

Type of Event: Workshop

Date/ Duration: 04-12-2023 to 08-12-2023 / 5 Days

Resource Person(s): Mr. S. Pardeep Kumar, Director-Smart Home & Industrial Solutions

Mr. D. Sai Satish, Director-India Servers

Name of the Coordinator(s): Dr. K. Phaneendra, Assoc. Prof., Dept. of IT, LBRCE

Mr. M. Rajesh Reddy, Sr. Asst. Prof., Dept. of IT, LBRCEMr.

M. Vijay Kumar, Sr. Asst. Prof., Dept. of IT, LBRCE Mrs. S.

Jyothi, Asst. Prof., Dept. of IT, LBRCE

Target Audience: III Year B.Tech Students of IT, ECE, EEE.

Total no of Participants: 104

Objective of the event:

The Department of Information Technology, LBRCE, has organized a 5-Day workshop on Internet of Things and Machine Learning for a duration of 05 days i.e., from 04-12-2023 to 08-12-2023 The Third year students are the target audience. The objectives of the course are:

- Provide introduction to Internet of Things (IoT) and exposure to various sub-fields and technology stacks ofIoT
- Enable people to convert their IoT product idea into a working prototype
- Provide Introduction to Natural Language Processing
- Exposure to various NLP Models

Schedule of the event:

Day wise schedule was given below and each and every day the related concepts areapplied through conducting practical implementation sessions.

Day-1:

- Introduction & Getting Started with IoT, Thonny IDE and Raspberry Pi Pico W
- Communication of Raspberry Pi Pico W with Sensors and Actuators

Hands-on Session:

- Configuration of Raspberry Pi PicoW
- Programming of Raspberry Pi Pico W

Day-2:

- Introduction to IoT Cloud Platforms
- Creating IoT System using Thingspeak Platform

Hands-on Session:

- Communication of IoT applications with Google firebase cloud
- Accessing Sensors data with Thingspeak Cloud

Day-3:

- Project ideas discussion and implementation

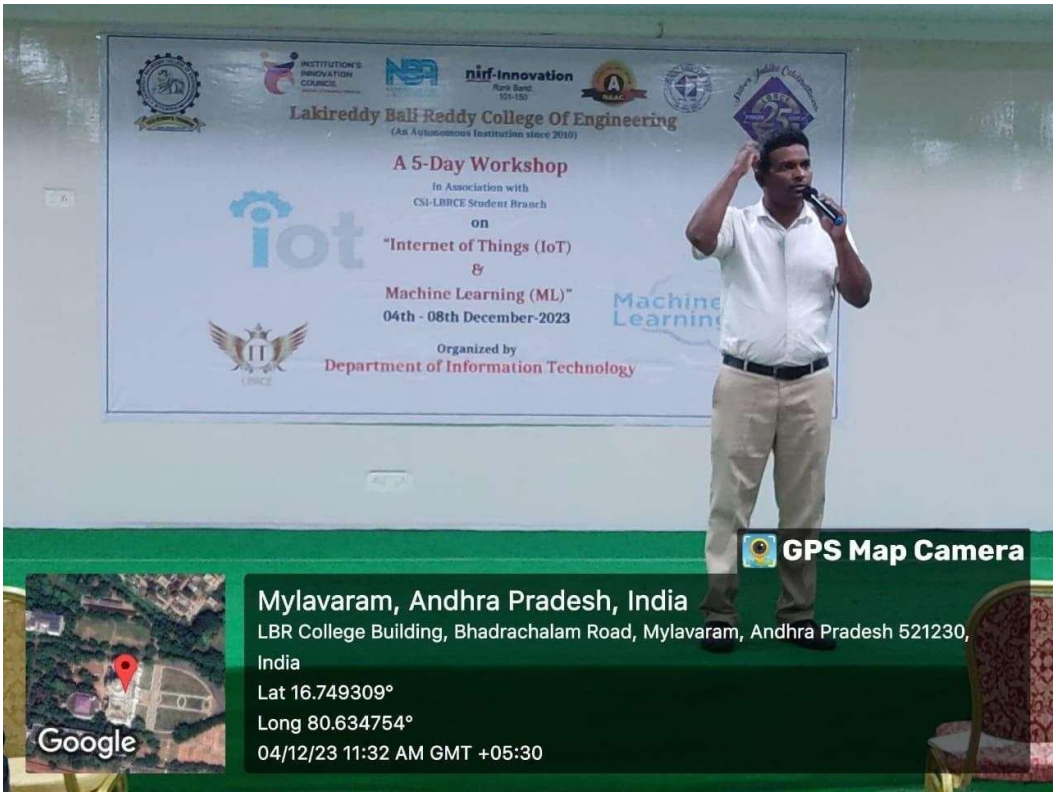
Day-4

- Introduction to Natural Language Processing (NLP)
- BERT (Bidirectional Encoder Representations from Transformers) Model (Hands-on Session)
- Fine Tuning of Generative Pre-trained Transformers (GPT) (Hands-on Session)

Day-5

- Fine-Tuning LLaMA-2 (Hands-on Session)
- OpenLLMs
- Text Pre-processing Techniques (Hands-on Session)
- Project ideas discussion and implementation

Photographs:



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(An Autonomous Institution since 2010)
Approved by AICTE, New Delhi and Permanently Affiliated to JNTUK, Kakinada
L.B. Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh - 521230