

SREYAS
INSTITUTE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS







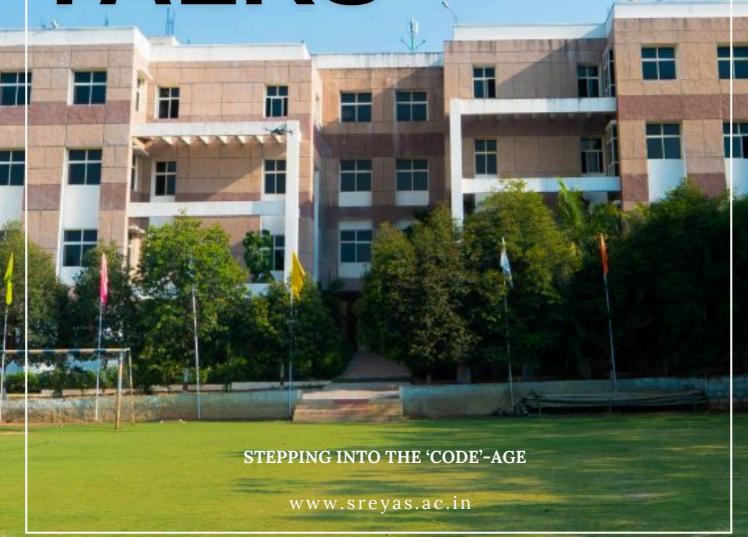






# TECH TALKS

DEPARTMENT
OF COMPUTER
SCIENCE AND
ENGINEERING



## SREYAS INSTITUTE OF ENGINEERING and TECHNOLOGY

The Campus is located at Nagole, in the heart of the city of Hyderabad. The Campus is just a stone's throw from the reputed media houses, service and IT Industry hubs. This is the result of deliberate planning of every aspect to create a world-class technical educational institution. The first impression as you enter the sprawling green and verdant campus of Sreyas leaves a lasting impression of innate calm and energizing growth.

The campus is scientifically planned and artistically designed. The students have access to the latest software and computing facilities for learning and research to groom them into future citizens.

Our student-centric approach will ensure that Sreyans gain not just depth and breadth in their chosen area of specialization, but a holistic set of skills that will equip them to face the real world. At every stage, there will be opportunities to expand their boundaries, with multiple platforms for collaboration and learning. The infrastructure is absolutely world-class with opportunities to build practical skills in state-of-the-art laboratories & workshops. The thriving, vibrant campus with its multitude of activities will help them develop a well-rounded and grounded personality that evolves naturally.

### **CAMPUS ADMINISTRATION**

Sreyas Institute of Engineering and Technology is a product of a dream and vision to excel and be a premier institution in the field of engineering. The college has the latest and best infra structure. It provides a wide arena for the staff and students to showcase their academic and extracurricular activities. Our endeavor is to provide the students exhilarating and enriching experience. The college is within the city limits yet in the midst of ecofriendly green and serene surroundings. offers Our institute an ideal opportunities to the students to grow into well-rounded professionals ready to address the technical challenges in the society for the betterment of humankind.



Sri. ANANTULA VINAY KUMAR REDDY (Hon. Chairman)



Sri. ANANTULA HRIDAY REDDY (Hon. Vice Chairman)

SREYAS is about always trying to push the bar a little more, constantly innovating and never standing still. If these are the values you believe in too, you will do well at SREYAS. If you have the drive and determination, come to SREYAS and we will help you realize your dreams. SREYAS will provide you with all the opportunities and liberty to discover yourself. The institution aims at encouraging the students to develop and master the knowledge and skills in the field of technology.

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### **CAMPUS ADMINISTRATION**



We, at Sreyas Institute of Engineering and Technology, are committed to build a congenial atmosphere for the next generation of engineers professionally. Our endeavor is to meticulously sculpture our students in being the best in their chosen fields. The main emphasis and mandate is excellence, perfection and all round development. We believe understand that as educators we have a special responsibility to nurture cooperation, tolerance and mutual

Sri. CHINTALA RAVINDRANATH YADAV respect in our diverse society. (Hon. Secretary)

SREYAS looks at the current trends of technological advancements in the world and adopts accordingly. Our mission is to provide quality education with innovative teaching methodology. Our organization creates a platform for the students in research, practical implementations with welldeveloped infrastructure so that young the demands talents meet and challenges universally.



Dr. S. SAI SATYANARAYANA REDDY (Principal)

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### FROM THE CHAIRMAN

Dear Staff and Students

Sreyas Institute of Engineering and Technology is a product of a dream and vision to excel and be a premier institution in the field of engineering. The college has the most modern and best infrastructure.

It provides a wide arena for the staff and students to showcase their academic and extracurricular activities. Our endeavor is to provide the students an exhilarating experience. The college is within the city limits yet in the midst of eco-friendly green surroundings. You will find nature and technology blending in our campus.

Sreyas will provide you with all the opportunity and liberty to discover yourself. The institution aims at encouraging the students to develop, master and gain the knowledge to the latest technology and global development. I believe that these will be the best years of your lives. The years you spend in our institution will shape your future and make you an excellent engineer and a wonderful human being.

On behalf of every member of this institution, I welcome you to our college. We will be here to guide and assist you all the way to achieve your goal and excel in all that you do while you are with us.

Respectfully Yours,

Sri Anantula Vinay Kumar Reddy Chairman, Sreyas Institute of Engineering and Technology



### **OUR VISION**

To be a center of excellence in technical education to empower the young talent through quality education and innovative engineering for well being of the society.



### **OUR MISSION**

- Provide quality education with innovative methodology and intellectual human capital.
- Provide conducive environment for research and developmental activities.
- Inculcate holistic approach towards nature, society and human ethics with lifelong learning attitude.

### **PEOS**

Computer Science and Engineering (CSE) is one the most prominent technical fields in Engineering. The curriculum offers courses with various areas of emphasis on theory, design and experimental work. Subject matter ranges from basics of Computers and Programming Languages to Compiler Design and Cloud Computing.

It maintains strong tie-ups with industry and is dedicated to preparing students for a career in Web Technologies, Object Oriented Analysis and Design, Networking, Databases and Software Engineering.

#### PEO-1

 Graduate will be empowered with strong fundamental concepts, analytical capability, programming and problem solving skills

#### **PEO-2**

 Graduates will be employed or may pursue higher education or undertake research.

#### **PEO-3**

 Graduates will lead in their profession with integrity and civic responsibility and a continuous learning attitude. JULY 2023 VOL. VIII | ISSUE I

## DEPARTMENT ADMINISTRATION



Mrs. Padma Joshi

Mrs Padma Joshi, working as an Associate Professor, is interested in research on Mobile Ad-hoc Sensors and Network Security (Computer Networks) and has an experience of 18 years in teaching. This magazine provides students and staff of Sreyas' fraternity to share information on the latest technologies that will equip all of us to stay competent in our respective fields of study and research. congratulate the staff and students of the Magazine team and wish them Success.





### Dr. Shaik Abdul Nabi (HOD)

I am extremely happy to release the Department Magazine, which highlights the activities of the CSE Department. This edition marks a milestone in students' thoughts and aspirations. I congratulate the staff and students and wish that everyone continues their untiring efforts to retain the college's reputation and grow to further high standards.



Dr. V. Biksham

Dr. V.Biksham is working as an Associate Professor, and his current research area includes Cryptography, Cloud computing, the Internet of Things and Machine Learning. He has an experience of 16 years in teaching field. This magazine is all about the technology that inspires students and staff to share information, spread the latest technical knowledge and cultivate right ways that will helpful in creating and innovating platform for students and staff to express their thoughts .

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# COMPUTER SCIENCE AND ENGINEERING

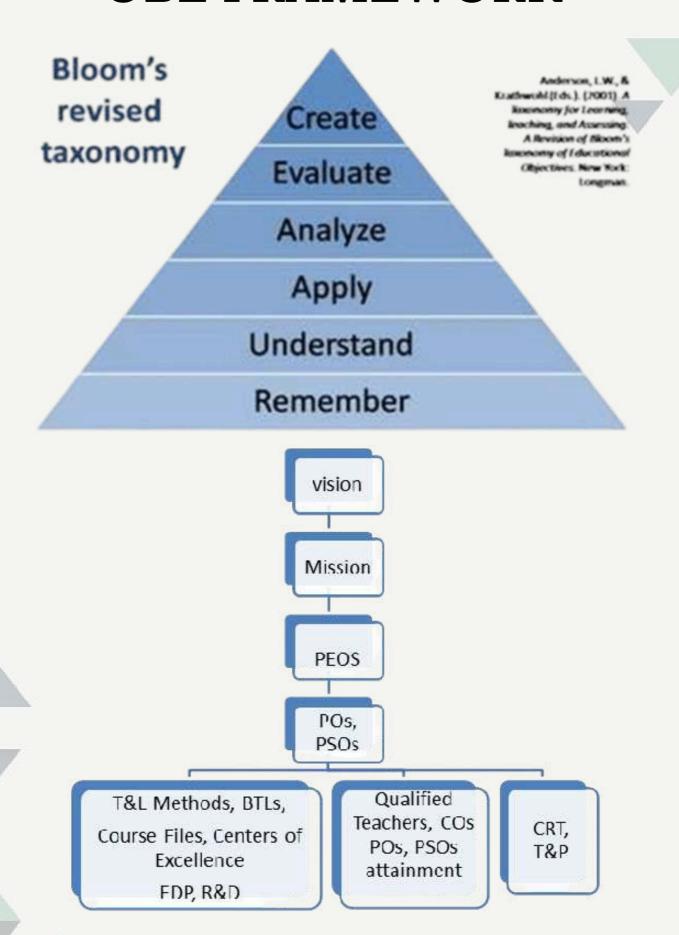
### **VISION**

• To excel in computer science engineering education with best learning practices, research and professional ethics.

### **MISSION**

- To offer technical education with innovative teaching, good infrastructure and qualified human resources.
- Accomplish a process to advance knowledge in the subject and promote academic and research environment.
- To impart moral and ethical values and interpersonal skills to the students

### **OBE FRAMEWORK**



## IN THIS ISSUE

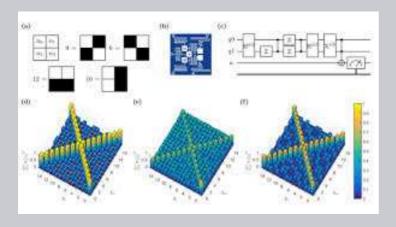
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## **FACULTY ARTICLES**

### QUANTUM COMPUTING MEETS MACHINE LEARNING: UNLOCKING A NEW ERA OF INNOVATION

Quantum computing and machine learning (ML) are two groundbreaking technologies that have individually reshaped modern science and industry. When combined, they hold the potential to revolutionize problem-solving across fields as diverse as drug discovery, financial modeling, and artificial intelligence. This article explores how these two technologies intersect and the transformative possibilities they offer.

**JULY 2023** 



### THE INTERSECTION OF QUANTUM COMPUTING AND MACHINE LEARNING

Quantum algorithms like the Quantum Approximate Optimization Algorithm (QAOA) and the Quantum Fourier Transform (QFT) can speed up ML tasks such as optimization and data transformation. For instance, quantum-enhanced principal component analysis (PCA) can handle large-scale datasets much faster than classical methods.

## THE FOUNDATIONS OF QUANTUM COMPUTING

Quantum computing leverages the principles of quantum mechanics—superposition, etanglement, and interference—to perform calculations at speeds unattainable by classical computers. Unlike classical bits, which exist as either 0 or 1, quantum bits (qubits) can represent 0, 1, or both simultaneously, thanks to superposition. This exponential increase in state representation enables quantum computers to tackle problems that are computationally infeasible for classical systems.

Examples of such problems include factoring large numbers, simulating quantum systems, and optimizing complex functions. While still in its early stages, quantum computing has demonstrated promising applications in areas where traditional computers struggle.



K.RAMYA LAXMI

# BIG DATA: TECHNIQUES FOR MANAGING AND ANALYZING LARGE DATASETS

Big data refers to vast amounts of structured and unstructured data that are too large or complex to be processed using traditional data management tools. Managing and analyzing big data presents unique challenges, including data storage, processing power, and the need for advanced analytical techniques. However, with the right tools and strategies, organizations can derive valuable insights from these massive datasets.

### DATA STORAGE AND MANAGEMENT STRATEGIES

To effectively manage large datasets, organizations must implement efficient storage solutions that can handle the sheer volume of data. Distributed storage systems, such as Hadoop Distributed File System (HDFS) or cloud storage platforms, provide scalable and reliable options. Data should be organized in a way that facilitates easy access and retrieval. Data management tools like data lakes and data warehouses help centralize and store big data for easier analysis.



## VISUALIZING BIG DATA INSIGHTS

Effective data visualization is critical for making complex big data insights understandable to decision-makers. Tools like Tableau, Power BI, and D3.js allow analysts to create visual representations of large datasets, helping to communicate patterns and trends. By visualizing data, organizations can better interpret results and make informed decisions based on their analysis

#### LEVERAGING MACHINE LEARNING AND AI FOR DATA ANALYSIS

Machine learning (ML) and artificial intelligence (AI) are indispensable tools when it comes to analyzing large datasets. These techniques help uncover patterns, make predictions, decision-making processes. automate algorithms historical training on organizations can gain insights that would otherwise be impossible to detect manually. Big data platforms like Apache Spark and TensorFlow provide the infrastructure necessary for running ML and AI models on large datasets.

#### FUTURE OF BIG DATA: EMERGING TRENDS

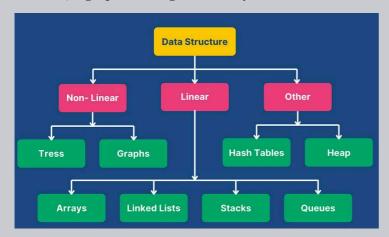
The field of big data is continuously evolving, with new trends and technologies emerging. Artificial intelligence and machine learning will play an even larger role in automating data analysis, making it faster and more accurate. Edge computing, where data is processed closer to where it is generated, will reduce latency in real-time data analysis. Additionally, blockchain could potentially provide greater transparency and security in data transactions. As these trends develop, organizations need to stay agile and adapt to new technologies to fully harness the power of big data.



PINNOJI ARCHANA

# THE IMPORTANCE OF DATA STRUCTURES IN EFFICIENT SOFTWARE DEVELOPMENT

Data structures are essential components of computer science that organize, manage, and store data in a way that enables efficient access and modification. The choice of data structure has a significant impact on the performance, scalability, and maintainability of software applications. Understanding the importance of selecting the right data structure is crucial for optimizing algorithms and building efficient, high-performing software systems



### THE ROLE OF ARRAYS AND LINKED LISTS IN PERFORMANCE

When deciding which data structure to use, it's important to consider the trade-offs associated with each. For instance, if your application requires frequent updates to the dataset, such as inserting or deleting elements, a linked list might be more suitable. On the other hand, if your application demands rapid access to elements, such as in a database index or a lookup table, an array could be the better choice.

Moreover, variations of these structures, like dynamic arrays or doubly linked lists, can offer additional flexibility. Dynamic arrays, such as those found in many programming languages' standard libraries, provide the advantage of resizing while maintaining the fast access characteristics of traditional arrays. Doubly linked lists, meanwhile, allow traversal in both directions, enhancing their versatility for certain applications.

Ultimately, the choice between arrays and linked lists—and potentially other data structures—should be guided by the nature of the operations your application will perform most frequently and the specific constraints they must operate under, such as memory usage and execution time. Understanding these nuances can lead to more efficient and effective software design.

#### STACKS AND QUEUES: HANDLING DATA IN A SPECIFIC ORDER

Stacks and queues are specialized data structures used to manage data in a specific order. A stack follows the "Last In, First Out" (LIFO) principle, making it suitable for scenarios like function calls in programming languages, where the most recent function call must be executed first. A queue operates on the "First In, First Out" (FIFO) principle, ideal for tasks like print spooling or handling requests in web servers, where the first request must be processed first. Their applications are varied, but the fundamental principle remains the same: managing data based on specific order rules.

### HASH TABLES: OPTIMIZING SEARCH OPERATIONS

Hash tables (or hash maps) are data structures that use a hash function to map keys to values, allowing for constant-time complexity, O(1), for search, insertion, and deletion operations. This makes hash tables incredibly efficient for applications that require fast access to data, such as caching, database indexing, and storing unique items in a collection. However, hash collisions can occur, which can degrade performance if not handled properly, making it essential to implement effective collision resolution techniques.



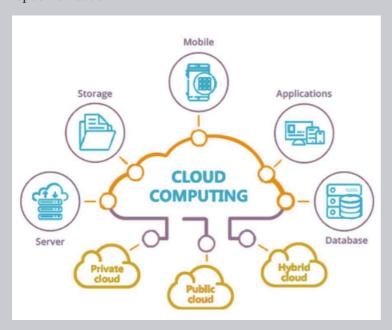
JOSHI PADMA NARASIMHACHARI
ASSOCIATE PROFESSOR

# CLOUD COMPUTING: TRANSFORMING THE FUTURE OF IT

Cloud computing refers to the delivery of computing services, including storage, processing power, and software applications, over the internet rather than relying on local servers or personal computers. This shift from traditional on-premise infrastructure to cloud-based solutions offers significant advantages, including cost efficiency, scalability, and flexibility. Cloud computing enables businesses to access vast computing resources on demand, reducing the need for expensive hardware and allowing for faster innovation and growth.

## TYPES OF CLOUD COMPUTING MODELS: IAAS, PAAS, AND SAAS

Cloud computing services are typically offered in three main models: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). IaaS provides virtualized computing resources like servers, storage, and networking, allowing businesses to manage their infrastructure needs without owning physical hardware. PaaS offers a platform for developers to build, test, and deploy applications, eliminating the need for managing the underlying infrastructure. SaaS delivers software applications over the internet on a subscription basis, removing the need for installation and maintenance on local devices. Understanding these models helps businesses select the right cloud solution based on their specific needs.



## CLOUD SCALABILITY: HOW THE CLOUD SUPPORTS GROWTH

One of the most compelling advantages of cloud computing is scalability. Cloud platforms offer on-demand resources, meaning businesses can scale their infrastructure up or down based on current needs. This flexibility allows companies to handle traffic spikes, seasonal demands, or unexpected growth without investing in costly physical infrastructure. For example, an ecommerce site can quickly scale up server capacity during a sale event and scale down afterward, saving costs during off-peak times. Cloud scalability ensures businesses remain agile and efficient as they grow.

### CLOUD COMPUTING AND MACHINE LEARNING

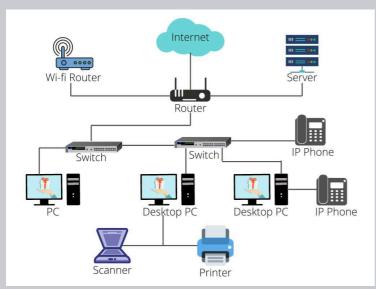
Cloud computing enables businesses to leverage powerful machine learning (ML) and artificial intelligence (AI) tools without the need for specialized hardware or infrastructure. Cloud providers offer scalable compute resources and pre-built ML models, allowing companies to integrate AI capabilities into their applications without significant upfront investment. For instance, AWS SageMaker, Azure Machine Learning, and Google AI provide frameworks to build, train, and deploy machine learning models at scale.



MARRIBOYANA SUDHAKAR
ASSISTANT PROFESSOR

# THE EVOLUTION AND IMPORTANCE OF COMPUTER NETWORKS

Computer networks have become an integral part of modern life, enabling communication, data exchange, and resource sharing across the globe. From local area networks (LANs) in homes and offices to vast wide area networks (WANs) that span continents, computer networks are the backbone of the digital age. This article explores the evolution, types, and significance of computer networks, as well as the challenges they face and future trends.



### IMPORTANCE OF COMPUTER NETWORKS

Communication: Computer networks enable instant communication through email, messaging, and video conferencing, connecting people across the globe. This has transformed personal and professional interactions, making collaboration more efficient and convenient.

Resource Sharing: Networks allow multiple users to share resources such as printers, storage devices, and Internet connections, reducing costs and improving resource utilization. Shared databases and cloud storage also facilitate centralized data management and accessibility.

Data Exchange: Networks support the exchange of large volumes of data between devices and systems, essential for activities like file sharing, online transactions, and data backup. This capability is critical for businesses, education, healthcare, and many other sectors.

Scalability and Flexibility: Networks can be easily expanded and reconfigured to accommodate new devices and changing requirements. This scalability and flexibility are vital for growing businesses and adapting to technological advancements.

### EVOLUTION OF COMPUTER NETWORKS

The concept of computer networks dates back to the 1960s with the ARPANET project initiated by the U.S. Department of Defense, laying the groundwork for the modern Internet. ARPANET demonstrated the potential of packet switching technology, allowing multiple computers to communicate over long distances. The development of protocols like TCP/IP in the 1980s and the proliferation of personal computers in the 1990s spurred Internet growth, leading to the interconnected world we experience today.



Computer networks are the backbone of our digital world, enabling communication, resource sharing, and data exchange across vast distances. As technology continues to evolve, networks will become faster, more secure, and more intelligent, driving innovation and transforming how we live and work. Despite the challenges, the future of computer networks is bright, with advancements that will further enhance connectivity and the potential for new, groundbreaking applications.



P. ANUSHA
ASSISTANT PROFESSOR

### **DEEPLEARNIG IN HEALTHCARE**

Deep learning, a subset of artificial intelligence (AI), has brought transformative changes across various fields, and healthcare is no exception. By leveraging neural networks with multiple layers, deep learning can analyze complex data patterns, making it an invaluable tool for improving diagnostics, treatment planning, and patient outcomes. This article explores the applications, benefits, and challenges of deep learning in healthcare.

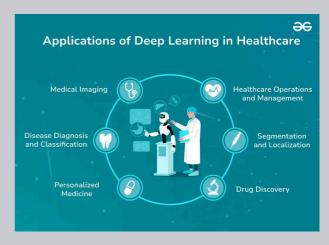
#### APPLICATIONS OF DEEP LEARNING IN HEALTHCARE

Medical Imaging: Deep learning has revolutionized medical imaging by enhancing the accuracy of diagnosing diseases from radiological images such as X-rays, MRIs, and CT scans. Convolutional Neural Networks (CNNs) are particularly effective in identifying abnormalities and patterns that might be missed by human eyes. For instance, deep learning algorithms can detect early signs of cancer, such as lung nodules in CT scans or breast cancer in mammograms, with high precision.

Predictive Analytics: Deep learning models can analyze large datasets to predict patient outcomes, disease progression, and potential complications. For example, Recurrent Neural Networks (RNNs) can process time-series data from electronic health records (EHRs) to predict the likelihood of readmissions or the development of chronic conditions. This predictive capability enables proactive interventions and personalized treatment plans.

Drug Discovery: The process of discovering new drugs is time-consuming and expensive. Deep learning accelerates this process by predicting how different compounds interact with biological targets. Generative Adversarial Networks (GANs) and other deep learning models can identify potential drug candidates and predict their efficacy and toxicity, significantly reducing the time required for drug development.

Personalized Medicine: By analyzing genetic information, deep learning can help develop personalized treatment plans tailored to individual patients. Deep learning models can identify genetic markers associated with specific diseases and predict how patients will respond to different treatments. This approach enables more effective and targeted therapies, reducing adverse effects and improving patient outcomes.



#### CHALLENGES OF DEEP LEARNING IN HEALTHCARE

Data Privacy and Security: Healthcare data is highly sensitive, and ensuring its privacy and security is paramount. Deep learning models require large datasets for training, raising concerns about data breaches and unauthorized access. Implementing robust data protection measures is essential to address these concerns. Interpretability: Deep learning models, often described as "black boxes," can be difficult to interpret. Understanding how these models arrive at specific conclusions is crucial for gaining the trust of healthcare professionals and ensuring the reliability of diagnostic and treatment recommendations.

Integration with Existing Systems: Integrating deep learning solutions into existing healthcare infrastructure can be challenging. Compatibility issues, the need for specialized hardware, and the requirement for staff training can hinder seamless adoption.



VADDHIRAJU SWATHI
ASSISTANT PROFESSOR

## STUDENT ARTICLES

### **IMPACT OF THE INTERNET**



The Internet has significantly impacted communication, education, business, and society. It has made global communication easier, provided vast information access, and revolutionized business with e-commerce and digital marketing. It also enables remote learning and enhances cultural exchange. However, it presents challenges such as privacy concerns, cyberbullying, and addiction. Overall, the internet has transformed daily life, offering both opportunities and risks.

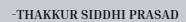
The internet has several disadvantages, including privacy issues, cybersecurity threats, and addiction. It can lead to social isolation, spread misinformation, and contribute to job displacement due to automation. These challenges highlight the need for careful management and responsible use.

-S.NANDHINI

### **AI IN EDUCATION**

Artificial Intelligence (AI) is reshaping education by tailoring learning experiences to individual needs. Adaptive learning systems, like those used by Duolingo and Khan Academy. adjust content delivery based on student performance. ensuring personalized support and advanced challenges for learners. Additionally. Al enhances accessibility through tools such as speech-to-text software, real-time translators, and screen readers, breaking barriers for students with disabilities and bridging language gaps. Interactive Al-driven content. like virtual labs and dynamic quizzes, makes learning engaging and practical, particularly in STEM education.

Al streamlines administrative tasks like grading and attendance tracking, allowing educators to focus more on teaching. Chatbots handle routine queries. providing students with instant support. Furthermore, Al addresses the skills gap by analyzing job market trends and recommending industry-relevant courses to learners.







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### **GREEN COMPUTING TECHNOLOGIES:**



**NIKHIL (21VE1A0538)** 

In an era where technology is ubiquitous, it's imperative to consider its environmental implications. Green

Computing, a holistic approach to IT, focuses on minimizing the environmental impact of technology. This article delves into the core concepts, technologies, and practices that underpin Green Computing, highlighting its significance in achieving a sustainable future.

Energy Efficiency: Optimizing hardware and software to reduce power consumption.

Virtualization: Consolidating multiple physical servers into virtual machines, improving resource utilization.

Cloud Computing: Leveraging remote servers to reduce the need for local hardware, promoting energy efficiency.

E-waste Reduction: Implementing responsible disposal and recycling practices for electronic waste.

Green Computing is not merely a trend but a necessity. By adopting energy-efficient hardware, leveraging virtualization and cloud computing, implementing power management techniques, and prioritizing e-waste reduction, individuals and organizations can significantly contribute to a sustainable digital future. It is imperative for tech industries and consumers alike to embrace Green Computing practices to mitigate the environmental impact of technology.

### **QUANTUM COMPUTING**



Quantum computing represents a paradigm shift in computational capabilities, promising to solve complex problems that are currently insurmountable for classical computers. By leveraging the principles of quantum mechanics, quantum computers utilize qubits, which can exist in multiple states simultaneously, allowing them to perform calculations at unprecedented speeds.

At the heart of quantum computing lies the principle of superposition, which enables qubits to represent both 0 and 1 at the same time. This contrasts sharply with classical bits, which can only exist in one of two states. Additionally, quantum entanglement allows qubits that are entangled to be correlated with each other, regardless of the distance separating them. These properties enable quantum computers to process vast amounts of information simultaneously, potentially outperforming classical computers in specific tasks.

Quantum computing stands at the forefront of technological innovation, with the potential to revolutionize industries and solve some of the world's most pressing problems. As research progresses and practical applications emerge, society must navigate the challenges and ethical considerations that come with this groundbreaking technology.

-SISTLA SREE SURYA SAROJ (21VE1A05J7)

### **BEYOND OUR SOLAR SYSTEM**

For centuries, humanity has looked to the stars, wondering whether other world. Exist beyond our own. Thanks to significant advancements in technology, we now know

that exoplanets, planets orbiting stars beyond our solar system, are not just a theoretical. possibility but a proven reality. The search for these distant worlds has made remarkable. Strides in recent years, driven by breakthroughs in data science and artificial intelligence.

What was once a daunting challenge of detecting planets light-years away has transformed. into an exciting and rapidly evolving field, where vast amounts of data from space missions. and observatories around the world are being analyzed like never before. In this article, we explore how data science is revolutionizing exoplanet discovery, opening new frontiers in the search for habitable worlds, and offering deeper insights into the nature of the



universe.

Astronomers use telescopes like NASA's Kepler and TESS missions to capture vast amounts of data, including tiny variations in light caused by exoplanets passing in front of their stars. These signals can be faint, making it hard to distinguish them from noise. This is where data science comes in. Machine learning algorithms and statistical models help scientists sift through these massive datasets, detecting patterns that humans might miss.

-GOPI CHAND K (21VE1A0599)



### **UNDERWATER DATA CENTERS**



Yashwanth(21VE1A0515)

The exponential rise in global digital activity necessitates innovative data centre solutions. Traditional land-based centres face significant challenges, including high energy consumption and cooling costs. Underwater data centres aim to overcome these issues by utilizing ocean environments for efficient cooling, minimal land use, and proximity to urban hubs for faster data access.

Natural Cooling: Seawater helps reduce heat generated by data centre operations, cutting cooling energy requirements.

Reduced Latency: Proximity to coastal cities ensures faster data transmission for end-users.

Sustainability: Renewable energy sources like tidal or offshore wind can power these centres.

Underwater data centres represent a promising innovation in sustainable IT. By integrating renewable energy, natural cooling, and edge computing, they offer a compelling solution for modern data infrastructure challenges. These submerged facilities harness the power of the ocean environment to maintain optimal operating temperatures, significantly reducing the need for energy-intensive cooling.



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### **SMART CONTRACTS AND DECENTRALIZED FINANCE**



R DINESH KARTHIK (21VE1A0555)

In the era of digital transformation, blockchain technology has emerged as a cornerstone of innovation, introducing concepts that redefine traditional systems. Among these groundbreaking innovations, Smart Contracts Decentralized Finance (DeFi) stand out as transformative forces in technology and finance. Smart contracts, selfexecuting agreements coded on the blockchain, automate processes and eliminate the need for intermediaries, enabling secure and transparent transactions. DeFi, on the other hand, leverages smart contracts to create a decentralized ecosystem for financial services like lending, borrowing, and trading, accessible to anyone with an internet connection. The advent of blockchain technology has paved the way for groundbreaking innovations in the financial world. Among these, Smart Contracts and Decentralized Finance (DeFi) have emerged transformative forces.

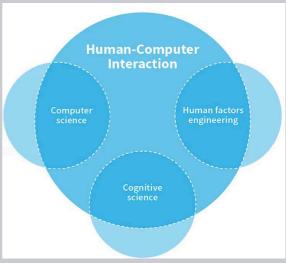
Smart Contracts and Decentralized Finance are revolutionizing the financial ecosystem by making it more accessible, transparent, and efficient. While challenges like scalability and regulatory uncertainty remain, the rapid pace of innovation ensures that these technologies will play a pivotal role in the future of global finance. As more industries adopt blockchain-powered solutions, Smart Contracts and DeFi are set to become integral to the digital economy.

### **HUMAN COMPUTER INTERACTION**



Human-Computer Interaction (HCI) is an interdisciplinary field that focuses on the design and use of computer technologies, emphasizing the interaction between people (users) and computers. As digital technology becomes an integral part of everyday life, advancements in HCI are crucial to improving user experience, accessibility, and the

overall effectiveness of digital systems. From intuitive touchscreen interfaces to voice-activated assistants, HCI research has driven innovations that make technology more accessible, efficient, and user-friendly. One of the key areas



of development is in adaptive interfaces, which adjust to individual user needs, preferences, and abilities, enhancing usability for diverse populations, including those with disabilities. Additionally, emerging technologies like brain-computer interfaces (BCIs), gesture recognition, and augmented reality (AR) are pushing the boundaries of how we interact with machines, enabling more immersive and natural ways to communicate with digital environments. As technology continues to evolve, HCI will play a pivotal role in ensuring that digital tools not only function effectively but also align with human needs, fostering more intuitive, inclusive, and meaningful interactions .

-G PRANATHI (21VE1A0547)

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## THE FUTURE OF AUGMENTED REALITY (AR) AND VIRTUAL REALITY (VR)



Augmented Reality (AR) and Virtual Reality (VR) are two rapidly evolving technologies that are transforming various industries, from entertainment and gaming to education and healthcare. AR overlays digital content onto the real world, enhancing the user's perception of their environment, while VR immerses users in a fully virtual environment, often using headsets and other sensory devices. As these technologies continue to develop, they promise to revolutionize how we interact with the digital and physical worlds. This article explores the future prospects of AR and VR and their potential impact on our lives.

The future of AR and VR will be significantly shaped by advancements in hardware and software. In terms of hardware, we can expect to see lighter, more comfortable headsets with higher resolution displays and improved field of view.

While the future of AR and VR is promising, there are several challenges that need to be addressed. One of the primary concerns is the issue of privacy and data security, as these technologies collect and process vast amounts of personal data. Ensuring that this data is protected and used ethically will be crucial

The future of Augmented Reality and Virtual Reality is bright, with the potential to transform various aspects of our lives. Advances in hardware and software will make these technologies more accessible and immersive, while their applications in entertainment, education, and the workplace will continue to expand.



-Asim Rupani (22VE1A05K5)

## THE RISE OF DEVOPS: BRIDGING THE GAP BETWEEN DEVELOPMENT AND OPERATIONS



DevOps, a movement promoting collaboration between software development and IT operations, aims to improve software delivery speed and quality through continuous integration, continuous delivery (CI/CD), and automation. This article explores DevOps' rise, core principles, and impact on the software development lifecycle. Collaboration and Communication: DevOps emphasizes close cooperation between development and operations teams, breaking down silos and aligning goals.

Continuous Integration and Continuous Delivery (CI/CD): Frequent code integration and automated testing/deployment reduce issues and enable faster releases.

Automation: Automating tasks like testing, deployment, and infrastructure provisioning minimizes errors and boosts efficiency.

Infrastructure as Code (IaC): Managing infrastructure through code ensures consistency, scalability, and repeatability.

DevOps bridges the gap between development and operations, fostering a culture of collaboration, automation, and continuous improvement. Embracing DevOps leads to faster delivery times, improved software quality, and enhanced operational efficiency, making it essential for organizations in the digital age.

-Srivatsa V Baggi (22VE1A05B8)



S.No.	Title of the Paper	Authors	Journal / conference/Book Chapter
1	Kernelized Extreme Learning Machine Enabled Churn Predictive Financial Risk Assessment Model	Dr.U.M.Fernandes Dimlo	Scopus Indexed Conference
2	A Data Sharing Protocol To Minimize Security And Privacy Risks Of Cloud Storage In Big Data Era	Mr. M A R Kumar	Scopus Journal
3	Enhanced Approach For Brain Tumor Detection	Mr. M A R Kumar	Scopus Journal
4	Paper Trading Simulator With Fundamental And Sentimental Analysis Of The Company	Mr. M.A.R Kumar	Scopus Journal
5	Analysis on relationship between Bitcoin Price Trend and sentiment of Bitcoin Related Tweets by ML and NLP	A.Anitha	Scopus Journal
6	Email Spam Detection using ML	A.Anitha	Scopus Journal
7	Cyber Threat Detection Using Event Profiles	Joshi Padma N	Neuro Quantalogy
8	A Forensic Activity Logger To Extract User Activity From Mobile Devices	P. Vijaya Lakshmi	Neuro Quantalogy
9	Forecasting Cyber Attacks Using Machine Learning	P. Nagaraj	Optoelectronics Laser
10	Smart Home Assistant	P. Vijaya Lakshmi	Journal of Algebraic Statistics
11	Quality Risk Analysis For Sustainable Smart Water Supply Using Data Perception	P. Srilatha	инs
12	Smart Street	P. Nagaraj	Design Engineering
13	Protecting Information Using Ai And Block Chain	A.R. Kumar	Journal of Algebraic Statistics
14	Image Segmentation Using Machine Learning Domain	Dr. V. Biksham	Journal of Algebraic Statistics
15	A Machine Learning Model For Air Quality Prediction For Smart Cities	P. Srilatha	Design Engineering
16	A Study Of Block chain Technology In Farmer's Portal	V. Swathi	Journal of Algebraic Statistics
17	Human Activity Recognition	Dr. Shaik Abdul Nabi	Journal of Algebraic Statistics
18	Cardio-Vascular Disease Prediction Using Classification Algorithms	C.Phaneendra	GIS Science
19	Urban Street Cleanliness Assessment Using Mobile Edge Computing And Deep Learning	P. Srilatha	Journal of Algebraic Statistics
20	Airfare Prognosis	M.A.R . Kumar	Journal of Algebraic Statistics
21	Real-Time People Counting For Surveillance Videos	Dr. Shaik Abdul Nabi	Journal of Algebraic Statistics
22	Self Driving Surveillance	V. Swathi	Journal of Algebraic Statistics
23	Fake Job Listing Analysis Domain	Srujana.V	Journal of Algebraic Statistics
24	Event Tracker	Joshi, Padma .N	YMER
25	Brest Cancer Prediction Using MI	Y. Sirisha	YMER
26	A Data mining Based model for detection of fraudulent behavior in water consumption	K.Narasimhulu	YMER
27	A Driver Drowsiness monitoring system using Visual behavior in ML	V.Swathi	IEEE Conference

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### **FACULTY CERTIFICATIONS**











#### VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY (VNRVJIET)

### Certificate of Participation

This is to certify that

Mrs. P. Archana

Sreyas Institute of Engineering and Technology

has participated in a 5-Day Workshop on **"Statistical Analysis using Python"** held at VNRVJIET, Hyderabad, Telangana, India during 6 –11 March 2023, organized by the Department of Humanities & Sciences, CSE(CYS, DS) and AI&DS.



V & N REddy.

V.S.N.Reddy Dr.T.Jo

TJayashree

Dr.T.Jayashree Dr.M.Raja Se Co-Convenor Convenor

m. Rajasekas\_

lariay

Dr.C.D.Naidu Principal















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### **ICT ACADEMY-BRIDGE 2022**

Sreyas Institute of Engineering and Technology participated in the ICT Academy - Bridge 2022 Event in December 2022. Our college was the Academic partner of the event. Dr Palanivel Thiagarajan, Honourable Minister for Information Technology and Digital Services, was the Chief Guest for the event. During the event, Sri Anantula Hriday Reddy, Vice-Chairman, Dr Sai Satyanarayana Reddy, Principal, Mr Sriharsha, ICT Academy - Coordinator, and Mr Anish Srivastav, Placements Director, met with the honourable minister. The minister enquired about the institution's progress, and the Vice-chairman and Principal proudly presented the significant progress and development our college has made during the last decade, reassuring us of our continued growth and success.







### **NPTEL CERTIFICATIONS**





































































Jul-Oct 2022





**Cloud Computing** 

Online Assignments 21.78/25 Proctored Exam 53.32/75

Total number of candidates certified in this course: 9640

Jul-Oct 2022

with a consolidated score of 75

19VEIA05LO

swayam



Indian Institute of Technology Kharagpu



Indian Institute of Technology Kharagpur

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UNITE, CELEBRATE, SHINE!

# 

# Invitation

WE REQUEST YOUR GRACIOUS PRESENCE ON THE OCCASION OF



# Orientation Day

Freshers-2022

Hearty Welcome to Students and Parents

B.Tech (1st Year)

Monday, October 31st, 2022 Timings: 09:00 AM



SREYAS INSTITUTE OF ENGINEERING AND TECHNOLOGY

**An Autonomous Institution** 

Bandlaguda, Nagole, Hyderabad

# ORIENTATION DAY



Institute of Engineering Sreyas and Technology conducted Orientation Day on 31st October, 2022, welcoming the first autonomous batch with gusto and elation. It was followed by inviting the dignitaries on to the dais. Prof. R. Limbadri, Chairman of the Telangana State Council of Higher Education (TSCHE) was the Chief Guest of the programme. Among other dignitaries present Secretary Chintala were Ravindranath Yadav, Vice-Chairman, Sri Anantula Hriday Reddy, Principal, Dr.S.Sai Satyanarayana Reddy, HoD, CSE, HoDs of H&S, CSE-AIML, CSE-DS, ECE, CIVIL and Mechanical departments





విద్యార్థులు నైపుణ్యాలను పెంచుకుని లక్ష్యాలను సాధించాలి : ఉన్మత విద్యా మందలి ఛైర్హన్ రింబాబ్రి



లెండాదిని సన్యానిస్తున్న రవీండ్రనాథ్యాడవ్, హృదయ్రెడ్డి హయత్నగర్, అక్టోబరు 31 డ్రభాతవాక్తం పోటీ డ్రపుంచంలో విద్యార్థలు తమ శ్రేవ్రడాన్నన్ని పెంపొందించుకోవరం ద్వారా అక్ట్రాలను సాధించాలని తెలంగాణ ఉన్నత విద్యాపుందడి శైర్మన్ డ్రా. ఆర్ లెంబాది అన్నారు. పెద్దఅంబరోపేట మున్ని పాలిటీ తట్టిఅన్నారంలోని తీయాన్ ఇన్స్టిట్యూట్ ఆఫ్ ఇంజనీరింగ్ అంద్ పొన్నాలతోలో సోమవారం ఇంజనీరింగ్ మొదటి నంచత్స్తరం విద్యార్థులకు 12వ ఓరిఎంటేషన్ కార్య క్రమం నిర్వహించారు. కార్యక్రమానికి ముఖ్య అతిథిగా హాజ శైన ఆయన మాట్లాడుతూ ఇంజనీరింగ్ విద్య విద్యార్థుల పేర్య విద్యార్థుల భవిష్యత్వరు ఎంతో కీలకమన్నారు. క్రమశిక్షణతో చదివి, వరిశోధనలు చేసి ఉత్తమ ఫలితాలను సాధించాలని సూచించారు. విద్యక్షకు నంవలదించిన శ్రేమ్యణ్యార్లు, ఉమ్మోషన్ (డెటిక్స్) గురించి పెవరించారు. విద్యార్థుల పోట్లు లు, డమ్మోషన్, డెడిక్స్స్ గురించి పెవరించారు. విద్యార్థుల పోట్లను బయోమెట్రటికోత అనుసంధానం చేసినట్లు తెలిపారు. కార్యక్రమంలో కళాశాల హ్మాదయ్ కెడ్డిల్స్ అనంతు ల హృదయోరెడ్డీలు కళాశాలలో విద్యార్థులకు అందించే బోధన, నదుపాయాల గురించి వివరించారు. కార్యక్రమంలో సుమారు 500 మందికేసైగా విద్యార్థులు వారి తెల్లిదం(దులు పాల్గాన్సారు.



మాట్లాడుతున్న ఉన్నత విద్యా మండలి చైర్మన్ లింబాద్రి

#### కష్టపడి చదివితే ఉజ్వల భవిష్యత్

#### రాష్ట్ర ఉన్నత విద్యా మందలి చైర్హన్ లింబాబ్రి

అబ్ముల్లాపూర్మెట్, అక్టోబర్ 31(అంద్రజ్యోతి): నాలుగేశ్ల కష్టపడి చదివితే ఇంజినీరింగ్ విద్యార్థులకు ఉజ్వల భవిష్యత్ ఉంటుందని తెలంగాణ రాడ్డ్డ ఉన్నత విద్యా మండలి వైర్మన్ ట్రొఫెనర్ ఆర్. లింబాట్రి అన్నారు. నగ ర శివారు తట్టిఅన్నారంలోని శ్రీయాన్ ఇనిస్టిట్యూట్ ఆఫ్ ఇంజినీరింగ్ అండ్ టెక్నాలజీలో సోమవారం ఓరియంటేషన్ డే కార్యకమం జరిగింది. ఈ కార్య క్రమానికి ముఖ్య అతిథిగా హాజరైన లింబాట్రి, కళాశాల డిన్సిపాల్ డాక్టర్ సాయు నత్యనారాయణరెడ్డి, కళాశాల సెశ్రెటరీ బింత రవీంద్రనాథ్యాదవన్, మైస్ వైర్యన్ అనంతుల డ్రూదయరెడ్డితో కలిసి జ్యోతి బ్రజ్వలన చేసి కార్యక్ర మాన్స్టి ప్రారంభించారు. ఈనందర్భంగా లింబాట్రి మాట్లాడుతూ పోటి బ్ర పంచంలో సాంకేతిక సైషణ్యాలపై దృష్టి పెట్లాలని విద్యార్థులకు నూచించారు. ఈలెందర్భంగా ప్రేట్లుని బాధ్యత విద్యార్థులపై ఉంద న్నారు. కార్యక్రమంలో అధ్యాపకులు, హెచ్వోడీలు, విద్యార్థులు పాల్గొన్నారు.

Date: 01/11/2022, Edition: Hyd\_Dilsukhnagar\_LB, Page: 7

## INDUCTION PROGRAMME





The SIET Induction Programme included workshops by eminent speakers and BEC classes to enhance English proficiency. Highlights included sessions on global engineering skills by Prof. Suresh Akella, ethics by Dr. B. Diwakar, academic regulations by Dr. B. Suresh Babu, and discipline by Prof. M.L. Sai Kumar. A special yoga session and practical BEC training further enriched the students' experience.









Tech Fest | Cultural Fest

# DANNUAL DAY

Wednesday, 29 March 2023 | 3:00 PM



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## ANNUAL DAY

Sreyas Institute of Engineering and Technology celebrated its 11th Annual Day, "SRIYAM 2023," on March 29, 2023, at 3:00 PM with vibrant festivities. The event showcased the immense talent of students through captivating music, dance, and theatre performances, along with a prize distribution ceremony recognizing achievements in academics, placements, sports, and cultural activities.























During his address at **SRIYAM 2023**, the Chief Guest, **Sri V. Nagi Reddy**, **IPS**, Director General of Telangana State Disaster Response and Fire Services Department, shared insightful advice on excelling in government exams. He reflected on his academic path, discussing how focus, determination, and efficient time management helped him succeed. **Sri Nagi Reddy** encouraged students to adopt a strategic approach to their studies, stressing the value of perseverance and consistent effort. His speech motivated students to stay committed and work hard towards their goals, whether in competitive exams or their future careers.







At **SRIYAM 2023**, Computer Science and Engineering students were recognized for their achievements. Vice Chairman **Sri Anantula Hriday Reddy** and Principal **Sri Sai Satyanarayana Reddy** presented Appreciation Certificates to students placed in reputed companies with high salary packages. Additionally, academic toppers were honored with certificates by the Chief Guest, **Sri V**. **Nagi Reddy, IPS**, for their excellence in studies.









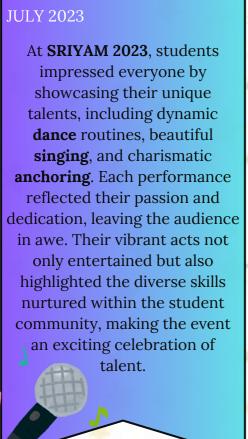








The band **Elyzium's** performance at **SRIYAM 2023** was a highlight of the event, energizing the audience with their lively music. Their vibrant set had everyone enjoying the rhythm, making it an unforgettable experience for all attendees.













#### STUDENT ACHIEVEMENTS







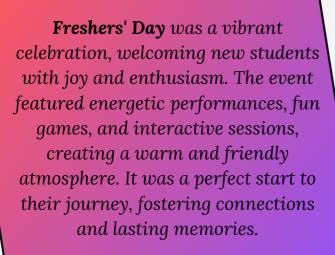






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### FRESHERS DAY























## GRADUATION DAY

Sreyas Institute of Engineering and Technology celebrated its 8th Graduation Day on November 12, 2023, honoring the graduating class of 2021-22. The ceremony featured chief guest Shri. Aniket Banerjee, a SharePoint Professional at Microsoft, who inspired students to embrace their futures with confidence. Graduation certificates were awarded, marking the culmination of years of hard work and achievement, encouraging graduates to embark on their

professional journeys with enthusiasm.









## **NSS EVENTS**



The **NSS wing** of our college promotes social responsibility through activities like cleanliness drives, health camps, and rural development programs. It empowers students to lead and serve, fostering teamwork and leadership. Dedicated to community welfare, it inspires meaningful contributions to society



### "CLAY GANESH" EVENT



Our college celebrated the eco-friendly 'Clay Ganesh' event with enthusiasm and creativity. Students handcrafted beautiful Ganesh idols from clay, promoting the importance of sustainable practices. The event emphasized the need to preserve nature while honoring traditions. Workshops were held to teach the art of idol-making, encouraging everyone to adopt eco-conscious methods. The celebration concluded with a pledge to support environmental conservation and inspire others to celebrate festivals responsibly.





#### FARMER EMPOWERMENT



The **NSS volunteers** from our college actively participated in a farmer empowerment initiative, reaching out to **local farming communities**. They organized interactive sessions to educate farmers on sustainable practices and modern agricultural techniques. Awareness drives on government schemes and financial support were conducted to empower them with essential resources. The volunteers also facilitated workshops on **organic farming** and **water conservation**, leaving a lasting impact. This effort reflected our commitment to supporting farmers and building a sustainable future.



#### **BLOOD DONATION CAMP**



The NSS wing of our college successfully organized a Blood Donation Camp on 23-December-2022. The event witnessed an overwhelming response from students, faculty, and staff, who came forward to donate blood and contribute to this noble cause. Expert medical professionals ensured a smooth and safe donation process, fostering awareness about the importance of blood donation in saving lives. The camp collected [number] units of blood, which will benefit patients in need across our community. We extend our heartfelt gratitude to all the donors and volunteers for making this event a resounding success and reinforcing the spirit of humanity and service.

#### TECHNICAL EVENTS











#### **SEMINARS & FDPs**











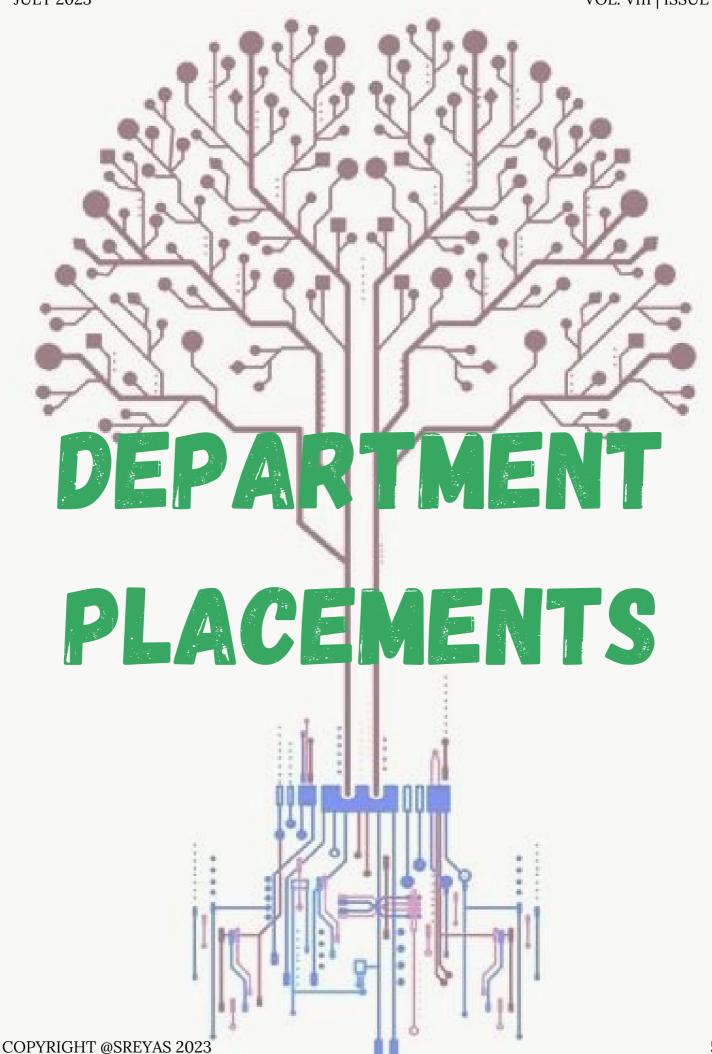
#### అవకాశాల కల్పనకు సదస్సులు అవసరం

**లశ, లబ్దుల్లాపూర్మేట్** : విద్యార్దులు వివిధ రంగాల్స్ సూతన అవకాశాలను వెతుక్కునేందుకు ఇన్నోవేషస్ ఇంక్యుబేషన్ ఎంటర్మైన్యూర్ష్మిప్ వంటి సదస్సులు నత్స లితాలను ఇస్తాయని జేయస్ ఇంజినీరింగ్ కళాశాల మిన్సెపాల్ దాక్టర్ సాయిసత్యనారాయణరెడ్డి అన్నారు. శనివారం పెద్ద అంజర్పేట మున్సెపాలిటీ పరిధిలోని గల జ్రేయస్ ఇంజిసీరింగ్ కళాశాలలో నిర్వహించిన విద్యార్థులకు ఫ్యాకర్జీలకు అవకాశాలు – ప్రారంభ దశ వ్యవస్థాపకులు అనే అంశంపై నిర్వహించారు. ఈ వద్యాల్లలకు అన్ అంశంపై నిర్వహించారు. త వ్యవస్థాపకులు అనే అంశంపై నిర్వహించారు. త నందర్భంగా ఆయన మాట్లాదుతూ విద్యార్థులకు ప్రాకర్జికి ఇలాంటా కార్యకమాలతో అవగాహన పెరు గుతుందన్నారు. అనంతరం యూత్ ఫెస్టివల్లో భాగంగా హెచ్ఐపీకి వ్యతిరేకంగా కళాశాల విద్యార్థులు భారంగా హెచ్ఐపీకి వ్యతిరేకంగా కళాశాల విద్యార్థులు



సదస్సులో పాల్గొన్న శ్రేయాస్ కళాశాల యాజ

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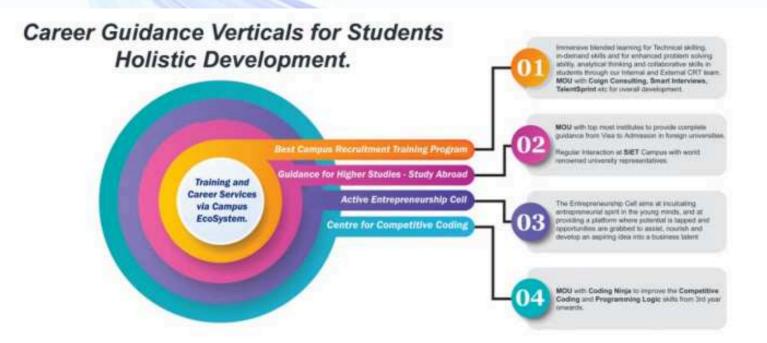


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### **OUR RECRUITERS**



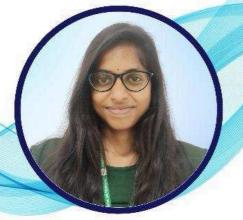




#### PLACEMENT STATISTICS

S. No.	Name of the Company	Number of Students Placed	CTC per Annum
1	Accellor	1	360000
2	ADP	3	600000
3	Acmegrade	1	600000
4	FACEPREP	2	360000
5	Infinity Learn	63	240000
6	Byju's	2	700000
7	Nalsoft	3	500000
8	Intellipaat	2	725000
9	SAVANTIS SOLUTIONS LLC HCL	17	350000
10	NNIIT	14	500000
11	Poornam Info Vision Private Limited	3	373000
12	Hexaware	8	400000
13	QSpiders	3	480000
14	Palle Technologies	10	400000
15	Rinex Technologies	8	400000
16	MPHASIS	8	400000
17	Tech Mahindra	2	325000
18	Unschool	3	650000
19	Enea Adaptive Mobile Security	1	550000
20	Logik Works	3	400000
21	DBS	1	890000
22	Smart Interviews	1	800000
23	Zognnu Technologies	1	500000
24	ExcelR Solutions	1	600000
25	Mindsparc	1	300000
26	Movate (CSS Corp)	2	320000
27	Sutherland	5	300000
28	PIE INFOCOMM PVT. LTD.	2	800000
29	Skolar	1	144000

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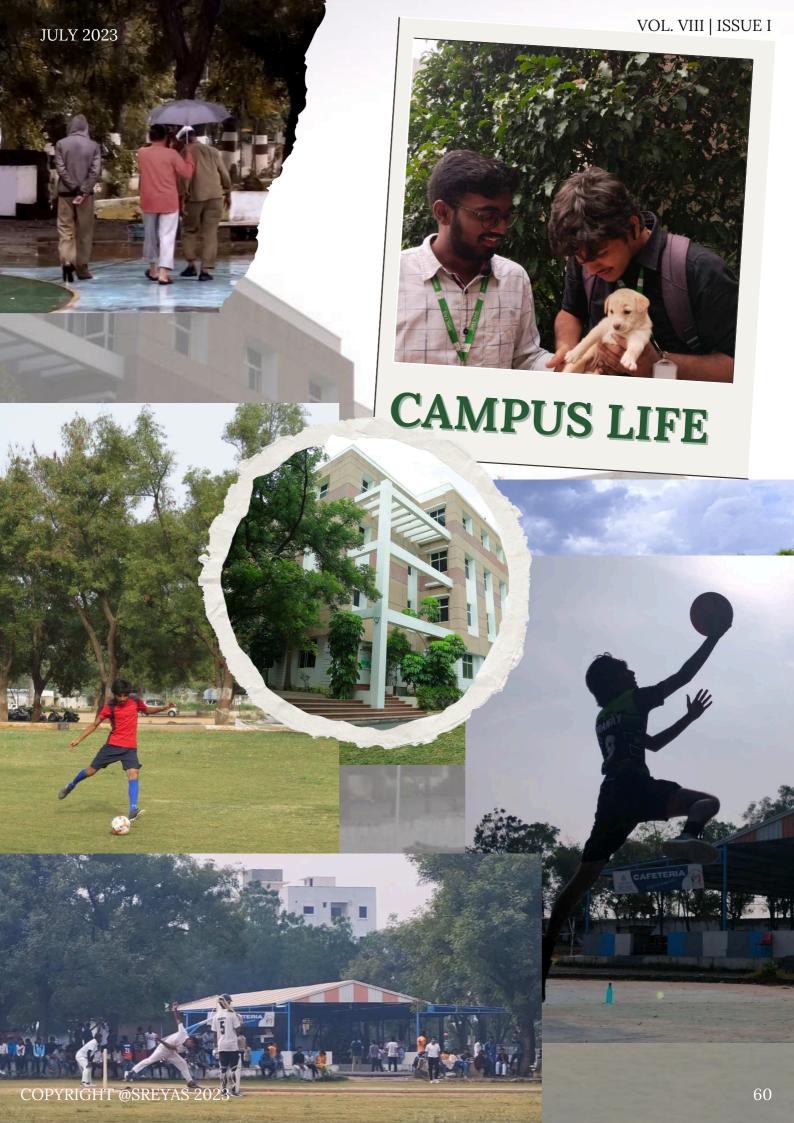
MARELLA HIMA BINDU ROLL NO. 19VE1A05M8 | CSE - 2023 BATCH **SALARY OFFERED** 



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# Weet the Editors

It brings me immense pleasure to present this year's edition of our college magazine, a vibrant reflection of the talent, creativity, and diversity within our campus. Each page showcases the brilliance of our students and faculty, highlighting achievements, stories, and art that inspire. This magazine is more than just a collection of articles; it is a testament to the collaborative spirit of our institution. Through its pages, we aim to capture the essence of our journey, aspirations, and shared dreams.

A heartfelt thanks to everyone who contributed their time and talent. May this magazine spark new ideas and encourage more voices to join us in the years ahead.



VADDHIRAJU SWATHI
ASSISTANT PROFESSOR







