MOUNT ZION

COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, Affiliated to Anna University & Accredited by NAAC with A+ Grade)
Lena Vilakku, Pilivalam P.O, Thirumayam TK, Pudukkottai - 622507
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

TECHQUEST '24

2023 - 2024

16th October 2024

VISION

- To be a leader in computer science and engineering education by empowering students with the knowledge, skills, and values needed to excel in technology, innovation, research, and service to society while fostering creativity, ethical responsibility, and a commitment to lifelong learning.

MISSION

- To provide a robust foundation in computer science and engineering through a curriculum that blends theoretical knowledge, practical expertise, and emerging technologies.
- To promote a culture of innovation and research by encouraging students and faculty to explore advanced technologies and address real-world challenges.
- To nurture leadership, teamwork, and ethical responsibility, equipping students to face global challenges and thrive in diverse professional environments.
- To forge strong partnerships with industry, academia, and society, enriching learning experiences, promoting entrepreneurship, and addressing societal needs through technological solutions.

FOUNDER CHAIRMAN

SRI JAYABARATHAN CHELLIAH, M.A. , (U.S.A), B.Ed.,

Sri Jayabarathan Chelliah was the Founder Chairman of Mount Zion Christian Education Trust. Under his able leadership, the first school, which began in 1988, grew into many institutions. He held a Bachelor's Degree in Science from Alagappa University, Karaikudi, Tamil Nadu, and a Bachelor's Degree in Education from Calicut University, Kerala. He graduated with a Master's Degree in Educational Administration from the prestigious Loma Linda University, California, U.S.A., in June 1978. He was also an honored alumnus of Loma Linda University. Additionally, he received the Dr. Radhakrishnan (Nallasiriyar) Award from the Government of Tamil Nadu. The institutions he initiated will continue to strive to reach the lofty ideals he envisioned.

CHAIRPERSON

MRS. FLORENCE JAYABARATHAN, M.A., B.Ed.,

Mrs. Florence Jayabarathan is the Chairperson of Mount Zion College of Engineering and Technology. Along with Sri. Jayabarathan Chelliah, she is one of the founders of the Mount Zion Institutions in Pudukkottai District. With over 50 years of dedicated teaching experience, she motivates both teachers and students to perform to their fullest potential.

DIRECTOR

Dr. JAYSON KEERTHY JAYABARATHAN, M.Tech., Ph.D.,

It is an honor to witness the enthusiasm and innovation of the Computer Science and Engineering department come to life through Techquest '24, a national-level Technical Symposium. This event continues to serve as a dynamic platform for showcasing cutting-edge advancements, academic excellence, and technological breakthroughs. It demonstrates the department’s steadfast dedication to advancing the boundaries of knowledge and creativity.

The dedication and collaborative efforts of students and faculty in organizing such a remarkable symposium are truly commendable. Their passion for addressing real-world challenges, fostering innovation, and inspiring future technologists exemplifies the core values of our institution. Techquest '24 is more than just an event—it is a celebration of ingenuity, learning, and the pursuit of excellence.

My heartfelt congratulations to the entire CSE team for their hard work and success in bringing this symposium to life. I eagerly look forward to witnessing even greater achievements in the future.

PRINCIPAL

DR. P. BALAMURUGAN M.E., Ph.D.,

It is an honor to share my thoughts on Techquest '24, a premier national-level Technical Symposium that embodies innovation, excellence, and collaboration within the Computer Science and Engineering department. This symposium serves as a vibrant platform for aspiring technologists to explore emerging technologies, showcase pioneering projects, and exchange groundbreaking ideas.

The achievements here show the dedication, creativity, and perseverance of our students and faculty. Their work to solve real-world problems and advance technology is impressive. Seeing their passion and drive to impact society is inspiring.

I would like to extend my sincere appreciation to the entire CSE team for their efforts in organizing this exceptional event. May Techquest '24 continue to empower, inspire, and lead the way for future innovations and excellence in the years to come.

DEAN

DR. S. ROBINSON, M.E., Ph.D.

Techquest '24, a national-level Technical Symposium, exemplifies the dedication, innovation, and excellence of the Computer Science and Engineering department. This event serves as a dynamic platform for students and faculty to showcase pioneering projects, research breakthroughs, and technical expertise. By fostering a culture of creativity, collaboration, and problem-solving, the symposium reinforces the department’s commitment to addressing real-world challenges through technology.

The enthusiasm and dedication displayed by the participants are truly inspiring, showcasing their unwavering pursuit of knowledge and excellence. Heartfelt congratulations to the entire CSE team for organizing such a successful event. May Techquest '24 continue to drive innovation and inspire future generations to push the boundaries of technology.

HEAD OF THE DEPARTMENT

Mrs. D. Elavarasi Ph.D*

Techquest '24, a national-level Technical Symposium, stands as a testament to the unwavering dedication, creativity, and academic brilliance of our students and faculty. This event serves as a dynamic platform for showcasing groundbreaking research, technological innovations, and collaborative initiatives that drive the future of technology.

The symposium highlights remarkable achievements, reinforcing the department’s commitment to fostering innovation, solving real-world challenges, and advancing knowledge. These efforts not only enrich the academic environment but also inspire individuals to pursue excellence with passion and determination.

I extend my sincere appreciation to the entire Computer Science and Engineering team for their outstanding efforts in making this symposium a resounding success. May Techquest '24 continue to celebrate achievements, ignite innovation, and pave the way for future advancements in technology and research.

THE EDITORIAL TEAM

Mrs. D. Elavarasi Ph.D*
Head of Department , CSE.

CHIEF EDITOR

Mrs. D. Thakshala Devapriya
Assistant professor , CSE.

CO EDITOR

B.Nelliyan ,CSE-IV

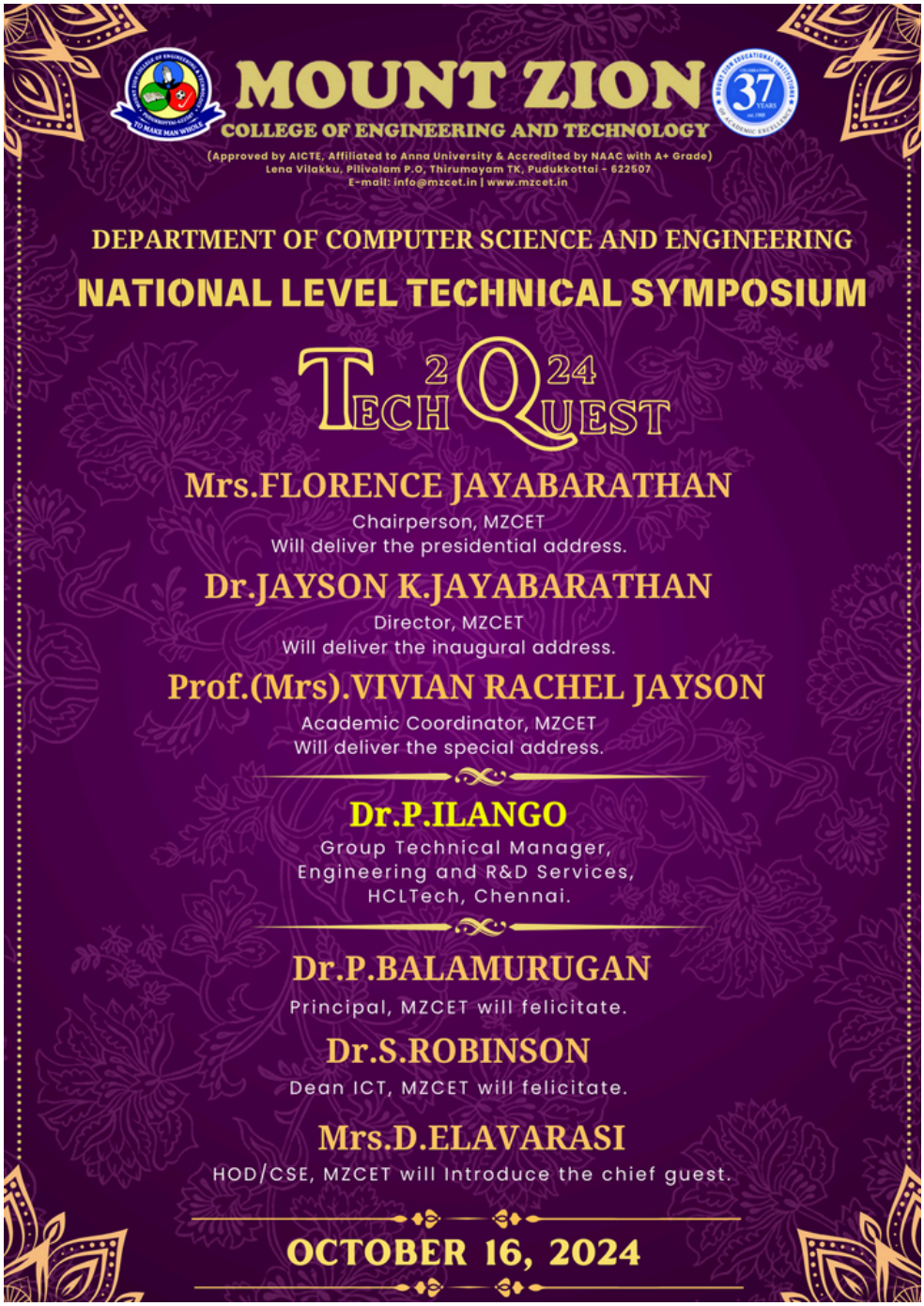
Student Editor

CSE - FACULTY LIST

S.No.	Name	Qualification	Current Designation
1	Mrs. D. Elavarasi	M.E.,Ph.D*	Assistant Professor
2	Dr.Jayson Keerthy Jayabarathan	M.Tech.,Ph.D.	Associate Professor
3	Mrs.Vivian Rachel Jayson	M.Tech.,	Assistant Professor
4	Dr.K. Gurunathan	M.E.,Ph.D.	Associate Professor
5	Dr. V. Kavitha	M.E.,Ph.D.	Associate Professor
6	Mr.P. Rajkumar	M.E.,Ph.D*.	Assistant Professor
7	Mr. G. Swaminathan	M.Tech.,	Assistant Professor
8	Mrs. M. S. Ramadevi	M.Tech.,	Assistant Professor
9	Mr. G.Sathishkumar	M.E.,M.B.A., M.S.W	Assistant Professor
10	Mr. V. Saravanan	M.E., M.B.A	Assistant Professor
11	Mrs. M. Sathya	M.E	Assistant Professor
12	Mrs. G. Sasikala	M.E	Assistant Professor
13	Mrs. X. Sharly Monica	M.E	Assistant Professor
14	Mr. S. Muthukarthik	M.E	Assistant Professor
15	Mrs. M. Mahamathi	M.E	Assistant Professor
16	Mrs. A. Sangeetha	M.E	Assistant Professor
17	Mrs. G.Iswarya	M.E	Assistant Professor
18	Mrs. R.Thenmozhi	M.E	Assistant Professor
19	Mrs. I. Pooja	M.E	Assistant Professor
20	Ms. Mizpah Hephzibah	M.E	Assistant Professor
21	Ms. T. Divya	M.E	Assistant Professor
22	Ms.K.Nisha	M.E	Assistant Professor
23	Mrs.A.Shanmugapriya	M.E	Assistant Professor

EVENT POSTER

EVENT INVITATION



TEAM MEMBERS

Programme Coordinators :

MRS. D.ELAVARASI

Mrs. A.TAKSALA DEVAPRIYA

S.No	Name of the Committee		Responsibilities	Members	Student members
1	Programme Committee		• Organising the event • Preparing the programme • Arranging the Chief Guests	Mrs. D.Elavarasi, HOD/CSE Mrs. A.Taksala Devapriya, AP/ECE	SR.Balaganesan-IV S.V.Dinesh Rajan-IV S.Prabha- IV Ronsia Parthees- IV
2	Prize Distribution Committee		• Buying the prizes • Preparing the prize list • Verifying the prize list • Preparing the certificates • Gathering the prize winners • Buying the shawls & souvenirs for the guests	Mrs. M.Sathya, AP/CSE	N.Evangeline - IV S Dharani -IV Megha lakshmi C–IV Varalakshmi - IV Lakshaya-III Steffena-III
3	Registration Committee		• Preparing & Collecting the registration form • Providing a list of arrived students to the technical committee	Mrs.Sasikala, AP/CSE	R.Dinesh-IV L.Surya -IV P.Devi - IV M.Sakthi Priya -IV Kanagalakshmi-III
4	Events Committee	COLLOQUIUM	• Preparing the presentation • Preparing the laptop for the program • Preparing content/questions • Identifying venues • Issuing winners list to the prize distribution committee	Mrs. D.Elavarasi,HOD/CSE Mrs.V.Kavitha, AP/CSE Mrs. A.Taksala Devapriya, AP/ECE	Sabarish K -IV Jeberson John J - IV Jerlin-IV Aarthi-III
		INNOVARIUM		Mrs.Sangeetha, AP/CSE Mrs. M.Ramadevi, AP/CSE	Karthick Raja U -IV R.Monica-IV P.Vidhya-IV P.Guhadharman-IV Jagatha-III
		QUAESTIUM		Mrs.Sharly Monica, AP/CSE	K.Naveen-IV A.Seenu-IV Jeyabharathi-IV Shruthika-IV Sathish-III
		DESIGNIUM		Mrs. R.Thenmozhi, , AP/CSE	G.Pramitha-IV A.Roslin Sylvia-IV Kabileswaran-IV B.Nelliyan-IV Monika-III
		ALGOTIUM		Ms. A.Mizpah Hephzibah AP/CSE	S.Sakthiram-IV K.Naveen -IV Siva Subramani-IV Noor Mohhamed-III
		BLENDARIUM		Mrs. R.Thenmozhi, AP/CSE	N.Mukesh Kanna-IV R.Pruthivi Raj-IV Deepak Kumar-IV TamilSelvan-IV

TEAM MEMBERS

		POSTER CREATION		Mr. Swaminathan, AP/CSE	Abdul Hakkeem - IV Balaji P - IV Kabileshwaran - IV Hariharan KL - IV
		PHOTOGRAPHY		Mrs.V.Brindha Devi AP/IT	Ramesh T - IV Prapakar - IV Sundharesan - IV Sanjay Kumar V- IV
5	Reception Committee		• Preparing reception table • Preparing the students for reception • Receiving the guests • Distributing the mementos, compliments & shawls to VIPs	Mrs.Aiswarya AP/CSE	C.Abinaya-IV C Megalakshmi-IV Dhuvashini-III Uma-III
6	PA System Committee		• Preparing PA system • Ensuring the running of the generator	Mr. Sathish Kumar, AP/CSE	Sanat Kumar-IV Sanatan Soren-IV Prajeen - II (AIDS) Raja shameer II
7	Designing & Printing Committee		• Design, Print posters & Dispatch posters • Design & Print flex • Design & Print program schedule • Fixing the flex boards	Mr. Swaminathan, AP/CSE	B.Nelliyan-IV Ramesh-IV Abdul Hakkeem-IV Nagarjun-IV
8	Invitation, Press & Publicity Committee		• Design & Print invitations • Distributing the invitations • Preparing the engagement column • Preparing the news report • Submitting the above to the press	Mr. Lakshmanan Kumar, AP/Physics	Ramesh T - IV S.Balaganesh-IV P.Balaji-IV Arun Kumar-IV
9	Hospitality & Food Refreshment Committee		• Refreshments for the guests (Snacks & Cool drinks) • Ensuring drinking water • Refreshment for staff	Mr. Saravanan, AP/CSE	Gowtham - IV Ganapathy Sankar - IV Santhana Raj-IV Siva Sundar-IV Kogila-IV Dharshini-IV
10	Hall Arrangement Committee		• Preparing the seating arrangements • Arrange water bottles on the stage • Arrange clean	Mr. Sathish Kumar, AP/CSE	Madhan-IV Jeevananthan-IV Aadhivishnu A - IV Gnanaprakash - IV

TEAM MEMBERS

		glasses on stage		
11	Web Designing	• Designing web site	Mrs. A.Taksala Devapriya, AP/ECE	N.Mukesh Kanna -IV K.Naveen-IV Janani-IV Mithra-III
12	VIPs Committee	• Receiving the VIPs when they arrive • Making arrangements for VIPs' refreshments • Sending off VIPs	Mrs. D.Elavarasi, HOD/CSE	Sharvesh-IV Tamil selvan - IV
13	Compering Committee	• Prepare script • Collect the shawl and memento	Ms. Anushiya Illamathy AP/MATHS	B.Jasmine Petrecia-IV Yogadharshini-lV Jasmine lll Gayathri-III
14	Budget Committee	• Prepare the budget proposal. • Collect the advance amount • Consolidate the expenditure	Mrs.K.Thenmozhi AP/MATHS	Abinaya C-IV Thirisha-IV
15	Technical Committee(Separated)	• Prepare technical work needed • Ensure the connectivity and alternate mechanism • Do a demo to check the working of each before the event	Mrs. A.Taksala Devapriya, AP/ECE	SR.Balaganesan-IV KL.Hariharan-IV L.Surya-lV P.Thirisha-lV R.Sowmiya K.Naveen-IV Sathish-III D.Monica - III S.Mithra-lv
16	Video Editing Committee	• Edit the video after the function	Mrs.V.Brindha Devi AP/IT	Sundharesan-IV Sanjay kumar V -IV V.Jahir Usain-IV A.Bose kumar-lV S.Enosh Blessing - III BT.Gopikaran - III

PARTICIPANTS

S.No	Team Name	Students Name	College Name	Title
1	White Walkers	S. Gogul, R. Sudharsan	Kongunadu College of Engineering and Technology	DNA Digital Storage Technology
2	Wit and Wisdom	R. Asha, S. Bhuvana	Tagore Institute of Engineering and Technology	Voice – IT
3	Geekers	Sarath, A. Sarathy	Sudharsan Engineering College	Digital Twins: Revolutionizing Manufacturing and Design
4	Thrisha K	K. Thrisha	Shanmuganathan College of Engineering	Ethical Implications of Artificial Intelligence
5	Minus One	Tharanetharan S, Abhishek P	Saranathan College of Engineering	Brain-Like Machines
6	Ctrl Plus C	Mohan Viknesh, Mohamed Yasar Arafath	Saranathan College of Engineering	Exploring the Next Frontier in 6G Wireless Technology
7	TECH TITANS	Nithya Darshini, K. Vishalini	Shanmuganathan Engineering College	The Rise of Autonomous Drone Swarms in Modern Technology
8	Thrisha K	Thrisha K	Shanmuganathan Engineering College	Eliminating Implicit Trust: Enhancing Security with Zero Trust
9	Lee	Leema Josephine	Shanmuganathan Engineering College	Transparent and Interpretable AI: The Future of Responsible AI
10	TEAM Tony Stark	Sukumar A	M.A.M College of Engineering and Technology	AI-Powered Threat Detection: Revolutionizing Cybersecurity
11	Swish Tech Duo	S. Vishalini, P. Swetha	Velammal College of Engineering and Technology	Next-Generation AI Processing with Edge Computing
12	SEC Team	Sasmitha, Bharathi	Shanmuganathan Engineering College	Real-Time Digital Replicas: The Future of Smart Systems
13	SEC CSE	Subikshalakshmi	Shanmuganathan Engineering College	Self-Healing Software: Towards Autonomous System Maintenance
14	HITALK	Sriram Palanisamy	Mookambigai College of Engineering	Smart Virtual Assistants: The Future of AI Chatbots in Business
15	Dharani Valli	Dharani Valli, Two	Sri Bharathi Engineering College	Building Trust in AI: Ensuring Ethical and Responsible AI Systems
16	The Tech Squad	Keerthiga B, Janani T	M.A.M. College of Engineering and Technology	AI-Powered Medical Diagnosis Enhancing Accuracy and Efficiency
17	Thunder Baze	Selvamani M, Mohammed Musharaff S	M.A.M. College of Engineering and Technology	The Fusion of Biometrics and Cryptography for Next-Gen Security

PARTICIPANTS

S.No	Team Name	Students Name	College Name	Title
18	Santhosh Kumar BM	NANDHA KUMAR P, Santhosh Kumar BM	Anjalai Ammal Mahalingam Engineering College	AI-Driven Debugging Enhancing Code Quality and Efficiency
19	Kings	Hari Haran, Karan, Chandra Mukilan	Kings College of Engineering	The Future of Human Legacy Digital Immortality Explained
20	Technical	Gayathiri, Brintha	Sri Bharathi Engineering College for Women	AI-Powered Robotics Revolutionizing Manufacturing and Daily Life
21	Innovators	Priya, Eshwari	Sri Bharathi Engineering College for Women	The Power of Zero-Knowledge Proofs Secure Authentication Without Revealing Data
22	Bright Stars	Harini, Lakshmi Prabha	Sri Bharathi Engineering College for Women	Decentralized Security How Blockchain Reinforces Cybersecurity
23	UNICORN	Shree Ganesh P	M.I.E.T Engineering College	BCI Technology Bridging Human Thought and Digital Systems
24	Tech Titans	Vaishnavi, Suba	Sri Bharathi Engineering College for Women	Automated Testing with AI Enhancing Accuracy and Efficiency
25	Tech Chandlers	Hawazin Azeenath Nisha, Rukshana Begam	Mohamed Sathak Engineering College	Cybersecurity in IoT
26	Tech Chandlers	Rukshana Begam, Hawazin Azeenath Nisha	Mohamed Sathak Engineering College	AI in Autonomous Vehicles
27	Tech Builders	J Blessy Margret, M C Sandhiya, C Kamatchi Shobana	Mohamed Sathak Engineering College	AR Cloud
28	Warriors	Kokila, Subash, Abinaya	Sudharsan Engineering College	AI-Powered Virtual Assistants
29	JJC	Soundarraj M	J.J. College of Arts and Science, Pudukkottai	Hyperautomation
30	Bat Man	Vilvan, Naveen	J.J. College of Arts and Science, Pudukkottai	Secure Multi-Party Computation (SMPC)
31	-	Ahamed Kabeer J, Abdul Asath A	-	AI-Powered Malware Detection
33	TEAM TECH TITANS	Idascadar Anbarasi, Kavi Priya	TAGORE INSTITUTE OF ENGINEERING AND TECHNOLOGY	AI in Agriculture
34	Miracle Squad	Hari Krishnan S	Mookambigai College of Engineering	AI in Legal Tech

PARTICIPANTS

S.No	Team Name	Students Name	College Name	Title
35	VCET	Kanishka, Anjali, Indumathi	Velammal College of Engineering and Technology	AI-Powered Medical Chatbots
36	AIK	Abinaya R, Barani Kumar V, Adhithiyan E	Sri Bharathi Engineering College for Women	Explainable AI (XAI) Enhancing Transparency in AI Decisions
37	Hebi	Jayasri, Kevin	UCE, BIT Campus, Anna University, Trichy	Zero Trust Security Model A Modern Approach to Cyber Defense
38	Ninja Tech	Ashika M, Deiva Prakashini K	St. Joseph's College of Engineering and Technology	Blockchain for Cybersecurity Decentralized Security Solutions
39	Dream Catcher	R Atchaya, R Akalya, A Jesika	St. Joseph's College of Engineering and Technology	AI in Software Testing Automated Bug Detection and Fixing
40	Little Princess	Akshaya M, Kaviya C, Monika Varthini G	St. Joseph's College of Engineering and Technology	6G Wireless Networks The Future of High-Speed Connectivity
41	The Dream Team	Keerthana K, Harshini E	St. Joseph's College of Engineering and Technology	Artificial Intelligence in Healthcare
42	Tech Trackers	Gopika E, Devisri O	St. Joseph's College of Engineering and Technology	Blockchain Technology and its Applications
43	Cracky Tech	Pongokulavasan	St. Joseph's College of Engineering and Technology	Cybersecurity in the Age of IoT
44	VCET	Karthikeyan M, Sivakumar K, Harish M	Velammal College of Engineering and Technology	5G Networks and Their Impact on Future Technology
45	Tesla Speakers	Sivasankar P, Selvaganapathy G	Mother Teresa College of Engineering and Technology	Edge Computing: A Revolution in Data Processing
46	Spartons	Karthikeyan, Jeffin Daniel	Mother Teresa College of Engineering and Technology	Quantum Computing and its Future in Cryptography
47	Team TEC	Ashwini, Ashwini Santhiya	Trichy Engineering College	Natural Language Processing (NLP) in Chatbots and Virtual Assistants
48	Crackers	Rahini, Rahini Monisha	Trichy Engineering College	Autonomous Vehicles: Challenges and Technologies

PARTICIPANTS

S.No	Team Name	Students Name	College Name	Title
49	Crafters	Arunkumar A, Madhurambal V	Trichy Engineering College	Augmented Reality (AR) and Virtual Reality (VR) in Education
50	ILMT STRING	Asha R, Bhuvana S	TAGORE INSTITUTE OF ENGINEERING AND TECHNOLOGY	Big Data and its Role in Business Decision Making
51	Wit and Wisdom	Karthikeyan M, Mohamed Aashik I	TAGORE INSTITUTE OF ENGINEERING AND TECHNOLOGY	Cloud Computing: Benefits and Challenges
52	Team MSEC	Gokul M, Vignesh R, Abishek Winston I	Mohamed Sathak Engineering College	Robotic Process Automation (RPA) in Business Operations
53	Crackers	Tharanetharan S, Abhishek P	Trichy Engineering College	Machine Learning Algorithms and their Applications
54	Crafters	Mohan Viknesh, Mohamed Yasar Arafath	Trichy Engineering College	Safeguarding IoT Networks from Security Threats
55	ILMT STRING	Nithya Darshini, K Vishalini	TAGORE INSTITUTE OF ENGINEERING AND TECHNOLOGY	AI-Powered Threat Detection in IoT
56	Team MSEC	Leema Josephine	Mohamed Sathak Engineering College	Blockchain for Securing IoT Data Transactions

PAPERS PRESENTED

Title: DNA Digital Storage Technology
Name: S. Gogul, R. Sudharsan
College: Kongunadu College of Engineering and Technology

Abstract:
DNA Digital Storage is an innovative technology that encodes data into the sequence of nucleotides (A, T, C, G) found in DNA molecules, presenting a potential solution to the growing demand for data storage capacity. As the amount of digital data generated worldwide continues to expand exponentially, traditional storage methods, such as hard drives and cloud storage, face limitations in terms of scalability and longevity. DNA, due to its dense and stable nature, offers an incredibly efficient means to store vast amounts of information. This paper explores the science behind DNA storage, discussing how data can be encoded into synthetic DNA and later decoded using advanced sequencing technologies. The advantages of DNA storage, including its high data density, durability, and potential to preserve information for thousands of years, are examined. Challenges such as high read/write costs, error rates, and scalability are also addressed. The paper concludes by evaluating the future of DNA data storage technology and its potential impact on industries like archival preservation, cloud computing, and big data management.

Title: Voice – IT
Name: R. Asha, S. Bhuvana
College: Tagore Institute of Engineering and Technology

Abstract:
Voice recognition technology has rapidly evolved, transforming the way we interact with devices and systems. "Voice-IT" represents a leap forward in how voice-based applications are integrated into everyday life, from personal assistants like Siri and Alexa to advanced systems in healthcare, customer service, and security. This paper explores the underlying technology of voice recognition, including speech-to-text algorithms, natural language processing (NLP), and machine learning models. It discusses how these technologies are enabling voice-driven user interfaces that allow for hands-free control, making communication more efficient and accessible. The advantages of voice recognition, such as increased convenience, accessibility for individuals with disabilities, and enhanced user experience, are highlighted. However, challenges such as accuracy, language nuances, privacy concerns, and issues related to speech recognition in noisy environments are also examined. The paper concludes by exploring the future of voice-driven technology and its potential to revolutionize various industries, creating new opportunities for seamless human-device interactions.

Title: Digital Twins: Revolutionizing Manufacturing and Design
Name: Sarath, A. Sarathy
College: Sudharsan Engineering College

Abstract:
A Digital Twin is a virtual replica of a physical object, process, or system, created using real-time data to simulate, predict, and optimize operations. This paper explores how digital twin technology is being applied in industries such as manufacturing, aerospace, and urban planning. By creating a digital replica of machinery or infrastructure, companies can monitor performance, predict failures, and optimize processes in real time. The paper also discusses how digital twins integrate with IoT, AI, and big data to enhance operational efficiency and reduce costs. The challenges of implementing digital twins, including data accuracy, integration complexity, and cybersecurity concerns, are also highlighted.

PAPERS PRESENTED

Title: Ethical Implications of Artificial Intelligence
Name: K. Thrisha
College: Shanmuganathan College of Engineering

Abstract:
The rise of Artificial Intelligence presents new ethical challenges that require careful consideration. This paper discusses the ethical implications of AI, particularly in areas such as job displacement, privacy, algorithmic bias, and decision-making transparency. With AI systems making increasingly important decisions in fields like healthcare, finance, and law enforcement, it is essential to ensure fairness, accountability, and transparency in their design and deployment. The paper explores the role of AI ethics frameworks, regulations, and accountability mechanisms in mitigating potential harms. It concludes by discussing the importance of interdisciplinary collaboration to ensure AI technologies benefit society while minimizing negative consequences.

Title: Brain-Like Machines
Name: Tharanetharan S, Abhishek P
College: Saranathan College of Engineering

Abstract:
As artificial intelligence (AI) and machine learning (ML) demand increasing computational power, traditional computing architectures struggle with energy efficiency and real-time adaptability. Neuromorphic Computing is a revolutionary approach that seeks to mimic the human brain's structure and functionality by using spiking neural networks (SNNs), synaptic plasticity, and parallel processing architectures. Unlike conventional computers that rely on binary logic, neuromorphic chips process data in an asynchronous and event-driven manner, leading to ultra-low power consumption and high efficiency in AI-driven applications.
Neuromorphic systems, such as Intel's Loihi, IBM's TrueNorth, and BrainScaleS, leverage bio-inspired architectures to enable real-time learning, self-adaptation, and edge AI processing. These chips are ideal for applications such as robotics, real-time speech recognition, medical diagnostics, and autonomous systems, where traditional deep learning models are inefficient.
This paper explores the fundamentals of neuromorphic computing, its key applications, leading innovations, and the future roadmap for integrating AI and neuroscience to create more efficient, intelligent computing architectures.

Title: Exploring the Next Frontier in 6G Wireless Technology
Name: Mohan Viknesh, Mohamed Yasar Arafath
College: Saranathan College of Engineering

Abstract:
With the rapid expansion of 5G networks, researchers and industry leaders are already looking ahead to 6G wireless technology, which is expected to revolutionize global communication by 2030. 6G aims to deliver ultra-fast speeds exceeding 1 terabit per second (Tbps), near-zero latency, and intelligent connectivity using AI-driven optimization and terahertz (THz) frequency bands.
This next-generation network will enable transformative applications such as immersive augmented and virtual reality (AR/VR), real-time holographic communication, AI-powered autonomous systems, and large-scale IoT connectivity. 6G will also integrate quantum communication, blockchain for secure transactions, and space-based networking to enhance global coverage.
Despite its promises, 6G faces challenges in infrastructure development, security risks, and high energy consumption. Researchers are exploring energy-efficient network architectures, sustainable deployment strategies, and new communication paradigms to overcome these obstacles.

PAPERS PRESENTED

Title: The Rise of Autonomous Drone Swarms in Modern Technology
Name: Nithya Darshini, K. Vishalini
College: Shanmuganathan Engineering College

Abstract:
Autonomous drone swarms represent a revolutionary advancement in aerial robotics, artificial intelligence, and swarm intelligence, enabling multiple drones to work collaboratively without direct human control. These swarms leverage AI-driven coordination, real-time communication, and decentralized decision-making to perform complex tasks efficiently in various industries.

Powered by technologies such as machine learning, edge computing, and computer vision, autonomous drone swarms can be deployed in military surveillance, disaster response, precision agriculture, smart logistics, and environmental monitoring. Their ability to self-organize, adapt to changing environments, and optimize mission efficiency makes them highly effective for large-scale operations.

However, challenges such as secure communication, collision avoidance, energy management, and ethical concerns must be addressed before widespread adoption. Researchers are developing bio-inspired algorithms, blockchain-based security frameworks, and advanced swarm coordination models to overcome these obstacles.

Title: Eliminating Implicit Trust: Enhancing Security with Zero Trust
Name: Thrisha K
College: Shanmuganathan Engineering College

Abstract:
With the increasing sophistication of cyber threats, traditional perimeter-based security models are proving insufficient in protecting sensitive data and networks. The Zero Trust Security Model offers a revolutionary approach by enforcing "never trust, always verify" principles, ensuring that every user, device, and application must continuously authenticate and be granted the minimum required access.

Zero Trust relies on multi-factor authentication (MFA), identity and access management (IAM), micro-segmentation, continuous monitoring, and encryption to mitigate security risks. This model is particularly effective in cloud computing, remote work environments, and hybrid IT infrastructures, where conventional security frameworks struggle to provide adequate protection.

While Zero Trust enhances cyber resilience, minimizes insider threats, and prevents lateral movement of attackers, challenges such as implementation complexity, integration with legacy systems, and performance overhead must be addressed. Organizations worldwide are adopting AI-driven threat detection, automated security policies, and behavioral analytics to strengthen Zero Trust frameworks.

Title: Transparent and Interpretable AI: The Future of Responsible AI
Name: Leema Josephine
College: Shanmuganathan Engineering College

Abstract:
As artificial intelligence (AI) systems become more complex and integrated into critical sectors such as healthcare, finance, autonomous vehicles, and law enforcement, understanding how these systems make decisions has become a major concern. Explainable AI (XAI) is an emerging field that aims to make AI models transparent, interpretable, and accountable, ensuring that humans can understand and trust AI-driven outcomes.

Traditional machine learning models, particularly deep learning and neural networks, often operate as "black boxes," where decision-making processes are difficult to interpret. XAI techniques, such as feature importance analysis, model visualization, local interpretable model-agnostic explanations (LIME), SHapley Additive exPlanations (SHAP), and counterfactual explanations, help provide insights into AI predictions and classifications.

PAPERS PRESENTED

Title: AI-Powered Threat Detection: Revolutionizing Cybersecurity
Name: Sukumar A
College: M.A.M College of Engineering and Technology

Abstract:
As cyber threats become more sophisticated, traditional security measures struggle to keep up with evolving malware, ransomware, phishing attacks, and zero-day exploits. AI-powered cybersecurity leverages machine learning, deep learning, and natural language processing (NLP) to provide real-time threat detection, automated response, and predictive analytics, significantly improving defense mechanisms against cyberattacks.
AI enhances cybersecurity by enabling behavior-based anomaly detection, adaptive risk assessment, and automated security responses. Unlike traditional rule-based security systems,
However, integrating AI into cybersecurity comes with challenges, including adversarial AI attacks, data privacy concerns, and the need for explainability in AI-driven security decisions. Additionally, cybercriminals are beginning to use AI to enhance their attack strategies, leading to an AI vs. AI cybersecurity arms race.

Title: Next-Generation AI Processing with Edge Computing
Name: S. Vishalini, P. Swetha
College: Velammal College of Engineering and Technology, Madurai

Abstract:
As artificial intelligence (AI) applications continue to grow, cloud-based AI processing faces challenges such as high latency, bandwidth limitations, and privacy concerns. Edge AI is an emerging paradigm that brings AI computation closer to the data source—whether it be IoT devices, smartphones, autonomous vehicles, or industrial sensors—reducing the need for constant cloud connectivity and enabling real-time, low-latency decision-making.
By leveraging on-device AI models, edge computing, and specialized AI chips (such as NVIDIA Jetson, Google Edge TPU, and Apple Neural Engine), Edge AI enhances efficiency, security, and reliability across various applications, including smart healthcare, predictive maintenance, autonomous robotics, and intelligent video analytics.
This paper explores the core principles, applications, challenges, and future trends of Edge AI, highlighting how it is transforming industries by enabling intelligent, autonomous, and efficient AI-driven solutions at the edge of the network.

Title: Real-Time Digital Replicas: The Future of Smart Systems
Name: Sasmitha, Bharathi
College: Shanmuganathan Engineering College

Abstract:
Digital Twin Technology is a cutting-edge innovation that creates a real-time virtual representation of physical objects, systems, or processes, enabling businesses to monitor, analyze, and optimize their assets with unprecedented accuracy. Digital twins integrate AI, IoT (Internet of Things), big data, and cloud computing to provide a dynamic, data-driven simulation of real-world entities.
Industries such as manufacturing, healthcare, smart cities, aerospace, and automotive are leveraging digital twins to predict failures, enhance operational efficiency, optimize supply chains, and reduce downtime through predictive maintenance and AI-driven decision-making. In healthcare, digital twins of human organs are being used for personalized medicine and surgical simulations, while in urban planning, digital twins help develop smart cities with optimized traffic flow and energy management.

PAPERS PRESENTED

Title: Self-Healing Software: Towards Autonomous System Maintenance
Name: Subikshalakshmi
College: Shanmuganathan Engineering College

Abstract:
As software systems become increasingly complex, traditional manual debugging and maintenance approaches struggle to keep pace with the demand for high availability, security, and resilience. Self-healing software is an emerging technology that enables applications to detect, diagnose, and automatically repair faults or vulnerabilities in real-time without human intervention.
By leveraging AI, machine learning, predictive analytics, and automated remediation techniques, self-healing software can identify anomalies, rollback changes, restart services, patch vulnerabilities, and optimize system performance dynamically. This is particularly valuable in cloud computing, IoT, cybersecurity, and enterprise IT environments, where downtime and security risks must be minimized.

Title: Smart Virtual Assistants: The Future of AI Chatbots in Business
Name: Sriram Palanisamy
College: Mookambigai College of Engineering

Abstract:
With advancements in artificial intelligence (AI), natural language processing (NLP), and machine learning, AI-powered chatbots have become an essential tool for businesses, automating customer support, sales, healthcare assistance, and task management. These chatbots can understand, process, and respond to user queries in real time, enhancing user engagement while reducing operational costs.
Unlike traditional rule-based chatbots, modern AI-driven chatbots utilize deep learning, contextual understanding, and sentiment analysis to provide more natural and human-like interactions. Technologies such as GPT-based chatbots, voice assistants, and multimodal AI interfaces are improving chatbot efficiency across various industries, including e-commerce, banking, healthcare, and education.

Title: Building Trust in AI: Ensuring Ethical and Responsible AI Systems
Name: Dharani Valli
College: Sri Bharathi Engineering College

Abstract:
As artificial intelligence (AI) systems become more integrated into daily life, ensuring that AI technologies are fair, transparent, accountable, and unbiased has become a growing concern. Ethical AI focuses on developing AI systems that respect human rights, promote fairness, and minimize harm, preventing issues such as algorithmic bias, discrimination, privacy violations, and misuse of AI in surveillance or misinformation.
Key ethical challenges in AI include bias in machine learning models, lack of transparency in decision-making (black-box AI), data privacy concerns, and accountability for AI-driven actions. Organizations and researchers are working on solutions such as explainable AI (XAI), fairness-aware algorithms, ethical AI governance frameworks, and regulatory policies to ensure AI operates responsibly.
Industries such as healthcare, finance, law enforcement, and social media are particularly affected by AI ethics, as biased or unregulated AI can lead to unjust outcomes, loss of trust, and legal consequences.

PAPERS PRESENTED

Title: AI-Powered Medical Diagnosis: Enhancing Accuracy and Efficiency
Name: Keerthiga B, Janani T
College: M.A.M College of Engineering and Technology

Abstract:
Advancements in artificial intelligence (AI) and machine learning are revolutionizing the field of medical diagnosis, enabling faster, more accurate, and efficient detection of diseases. AI-powered diagnostic systems leverage deep learning, natural language processing (NLP), and computer vision to analyze medical images, patient records, genetic data, and clinical reports, assisting doctors in making more precise diagnoses.
AI has proven to be highly effective in radiology (X-rays, MRIs, CT scans), pathology, dermatology, cardiology, and oncology, helping detect diseases such as cancer, cardiovascular disorders, diabetic retinopathy, and neurological conditions at an early stage. AI models trained on vast datasets can identify patterns that may be difficult for human doctors to recognize, thereby improving early disease detection, reducing misdiagnosis, and enhancing patient care.

Title: The Fusion of Biometrics and Cryptography for Next-Gen Security
Name: Selvamani M, Mohammed Musharaff S
College: M.A.M College of Engineering and Technology

Abstract:
With the increasing need for secure authentication and data protection, biometric cryptography has emerged as a promising technology that integrates biometric authentication (fingerprints, iris scans, facial recognition, voice patterns) with cryptographic techniques to enhance security. Unlike traditional password-based systems, biometric cryptography ensures strong authentication, non-repudiation, and resistance to identity theft by using an individual's unique biological traits to generate or protect cryptographic keys.
Biometric cryptography includes techniques such as biometric key binding, biometric key generation, fuzzy vaults, and cancellable biometrics, ensuring that biometric data remains secure while being used for encryption and decryption processes. This approach has significant applications in banking, secure communications, digital identity management, and cybersecurity, providing an additional layer of protection against hacking and fraud.

Title: AI-Driven Debugging: Enhancing Code Quality and Efficiency
Name: Nandha Kumar P, Santhosh Kumar BM
College: Anjalai Ammal Mahalingam Engineering College

Abstract:
Software debugging is a critical yet time-consuming phase in software development. Traditional debugging methods rely on manual inspection, static analysis, and conventional testing techniques, which can be inefficient when dealing with large and complex codebases. AI-powered code debugging leverages machine learning, deep learning, and natural language processing (NLP) to automate bug detection, analyze error patterns, and suggest intelligent fixes, significantly reducing debugging time and improving software quality.
AI-driven debugging tools can predict potential errors, analyze runtime behavior, recommend optimized fixes, and even auto-correct code using techniques such as reinforcement learning, deep code analysis, and predictive modeling. Companies like Microsoft (GitHub Copilot), DeepCode, and OpenAI (Codex) have introduced AI-powered debugging solutions that assist developers in writing more reliable and secure cod

PAPERS PRESENTED

Title: The Future of Human Legacy: Digital Immortality Explained
Name: Hari Haran, Karan, Chandra Mukilan
College: Kings College of Engineering

Abstract:
With advancements in artificial intelligence, neural networks, and big data, the concept of digital immortality—the ability to preserve and replicate human consciousness in digital form—has gained significant attention. This futuristic idea involves storing human thoughts, personality traits, emotions, and memories through AI-driven systems, enabling a digital version of a person to interact and exist beyond their physical lifespan.

There are several approaches to digital immortality, including mind uploading, AI-powered chatbots trained on personal data, and neuroprosthetic memory storage. Companies and researchers are already working on projects such as AI-based personality simulations, voice cloning, and digital avatars, allowing future generations to interact with digital recreations of deceased individuals.

While digital immortality offers profound possibilities, it also raises ethical, philosophical, and privacy concerns. Issues such as data ownership, consciousness replication, authenticity of digital personas, and the moral implications of digital resurrection must be carefully addressed. Additionally, the feasibility of true human consciousness transfer remains a subject of debate among neuroscientists and AI researchers.

Title: AI-Powered Robotics: Revolutionizing Manufacturing and Daily Life
Name: Gayathiri, Brintha
College: Sri Bharathi Engineering College for Women

Abstract:
The integration of artificial intelligence (AI) with robotics is revolutionizing industries by enabling robots to perform complex tasks with autonomy, precision, and adaptability. Unlike traditional programmed robots that follow fixed instructions, AI-powered robots leverage machine learning, deep learning, computer vision, and natural language processing (NLP) to sense, learn, and make intelligent decisions in dynamic environments.

AI-powered robotics has applications in various fields, including manufacturing (smart automation), healthcare (robot-assisted surgery), logistics (autonomous warehouses), military (AI-driven drones), and personal assistance (service robots and humanoids). Robotics combined with reinforcement learning, neural networks, and real-time data analytics allows machines to improve efficiency, detect anomalies, and interact more naturally with humans.

Title: The Power of Zero-Knowledge Proofs: Secure Authentication Without Revealing Data
Name: Priya, Eshwari
College: Sri Bharathi Engineering College for Women

Abstract:
In the digital age, privacy and security are paramount, especially in authentication, identity verification, and secure transactions. Zero-Knowledge Proofs (ZKPs) offer a groundbreaking cryptographic method that allows one party (the prover) to demonstrate knowledge of a value to another party (the verifier) without revealing the actual data. This enables secure verification while preserving confidentiality, making ZKPs highly valuable in blockchain technology, cybersecurity, secure authentication, and digital identity management.

Zero-Knowledge Proofs are categorized into interactive and non-interactive proofs, with technologies like zk-SNARKs (Zero-Knowledge Succinct Non-Interactive Arguments of Knowledge) and zk-STARKs (Scalable Transparent Arguments of Knowledge) driving advancements in privacy-focused applications. These proofs have gained significant adoption in cryptocurrencies (e.g., Zcash for anonymous transactions), secure voting systems, confidential data sharing, and verifiable computing.

PAPERS PRESENTED

Title: Decentralized Security: How Blockchain Reinforces Cybersecurity
Name: Harini, Lakshmi Prabha
College: Sri Bharathi Engineering College for Women

Abstract:
Blockchain technology is transforming cybersecurity by offering decentralization, transparency, and immutability. Unlike traditional security models, blockchain enables tamper-proof record-keeping, secure identity management, and protection against cyber threats like data breaches and DDoS attacks. Industries such as finance, healthcare, and government are leveraging blockchain to enhance data security, prevent fraud, and enable zero-trust architectures. However, scalability, regulatory compliance, and energy consumption remain challenges to widespread adoption.

Title: BCI Technology: Bridging Human Thought and Digital Systems
Name: Shree Ganesh P
College: M.I.E.T Engineering College

Abstract:
Brain-Computer Interfaces (BCIs) enable direct communication between the human brain and external devices, allowing users to control computers, prosthetics, and even smart home systems using neural signals. BCIs have applications in healthcare (assisting paralyzed individuals), neuroscience research, and gaming. Advances in AI, neural implants, and non-invasive EEG-based BCIs are accelerating progress. However, privacy concerns, ethical issues, and signal accuracy pose challenges for widespread implementation.

Title: Automated Testing with AI: Enhancing Accuracy and Efficiency
Name: Vaishnavi, Suba
College: Sri Bharathi Engineering College for Women

Abstract:
AI-driven software testing automates bug detection, code analysis, and test case generation, significantly reducing development time. AI-powered tools use machine learning, predictive analytics, and natural language processing (NLP) to enhance testing efficiency. Applications include regression testing, UI testing, and security testing. Despite its advantages, challenges such as test data quality, AI model biases, and integration with existing frameworks must be addressed for optimal implementation.

Title: Cybersecurity in IoT
Name: Hawazin Azeenath Nisha, Rukshana Begam
College: Mohamed Sathak Engineering College

Abstract:
The Internet of Things (IoT) connects billions of devices, making them vulnerable to cyberattacks, data breaches, and unauthorized access. AI-driven security models, blockchain-based authentication, and anomaly detection algorithms are helping strengthen IoT cybersecurity. Key concerns include device authentication, data privacy, and regulatory compliance, requiring innovative approaches to secure IoT networks.

PAPERS PRESENTED

Title: AI in Autonomous Vehicles
Name: Rukshana Begam, Hawazin Azeenath Nisha
College: Mohamed Sathak Engineering College

Abstract:
Autonomous vehicles rely on AI-powered computer vision, deep learning, and sensor fusion for real-time navigation, obstacle detection, and decision-making. AI enhances safety, optimizes traffic flow, and reduces human intervention in driving. However, challenges such as ethical AI decision-making, regulatory approvals, and cybersecurity risks need to be addressed for broader adoption.

Title: AR Cloud
Name: J Blessy Margret, M C Sandhiya, C K Kamatchi Shobana
College: Mohamed Sathak Engineering College

Abstract:
AR Cloud enables persistent 3D mapping and real-world augmentation, allowing users to interact with digital overlays in a shared environment. It plays a critical role in navigation, gaming, industrial training, and smart cities. However, ensuring data privacy, synchronization, and latency reduction is essential for large-scale implementation.

Title: AI-Powered Virtual Assistants
Name: Kokila, Subash, Abinaya
College: Sudharsan Engineering College

Abstract:
AI-powered virtual assistants use NLP, deep learning, and speech recognition to automate tasks, answer queries, and provide personalized recommendations. Applications range from customer service and healthcare to personal productivity and smart homes. Key challenges include context understanding, multilingual support, and ethical AI interactions.

Title: Hyperautomation
Name: Soundarraj M
College: J.J. College of Arts and Science (Autonomous), Pudukkottai

Abstract:
Hyperautomation combines AI, robotic process automation (RPA), and machine learning to automate business processes beyond traditional automation. It enhances efficiency in finance, healthcare, supply chain management, and IT operations. However, challenges such as scalability, workforce impact, and security risks need to be addressed.

Title: Secure Multi-Party Computation (SMPC)
Name: Vilvan, Naveen
College: J.J. College of Arts and Science, Pudukkottai

Abstract:
SMPC allows multiple parties to jointly compute a function while keeping inputs private, ensuring secure data sharing in financial, healthcare, and AI training applications. Challenges include high computational costs and practical deployment complexities.

PAPERS PRESENTED

Title: AI in Agriculture
Name: Idascadar Anbarasi, Kavi Priya
College: Tagore Institute of Engineering and Technology

Abstract:
AI in agriculture enhances crop monitoring, yield prediction, pest detection, and automated irrigation using satellite imagery, drones, and machine learning models. It promotes sustainable farming and resource optimization.

Title: AI in Legal Tech
Name: Hari Krishnan S
College: Mookambigai College of Engineering

Abstract:
AI in legal tech automates contract analysis, legal research, and compliance tracking, reducing workload and improving accuracy in legal proceedings. Ethical and bias-related concerns in AI decision-making must be addressed.

Title: AI-Powered Medical Chatbots
Name: Kanishka, Anjali, Indumathi
College: Velammal College of Engineering and Technology

Abstract:
AI-powered medical chatbots use NLP and machine learning to assist in patient inquiries, preliminary diagnosis, and mental health support. They help reduce healthcare costs and improve accessibility but require robust data privacy measures and accuracy validation.

Title: Explainable AI (XAI): Enhancing Transparency in AI Decisions
Name: Abinaya R, Barani Kumar V, Adhithiyan E
College: Sri Bharathi Engineering College for Women

Abstract:
As AI systems become increasingly complex, understanding their decision-making process is critical. Explainable AI (XAI) aims to make AI models more transparent by providing human-interpretable explanations for their outputs. Techniques such as SHAP (Shapley Additive Explanations), LIME (Local Interpretable Model-Agnostic Explanations), and counterfactual explanations are used to enhance interpretability. XAI is particularly important in high-stakes applications like healthcare, finance, and law enforcement. However, balancing model accuracy and explainability remains a challenge.

PAPERS PRESENTED

Title: Zero Trust Security Model: A Modern Approach to Cyber Defense
Name: Jayasri, Kevin
College: UCE, BIT Campus, Anna University, Trichy

Abstract:
Traditional security models rely on perimeter-based defenses, which are ineffective against modern cyber threats. The Zero Trust Security Model (ZTSM) enforces a "never trust, always verify" approach, requiring continuous authentication, authorization, and monitoring. It integrates multi-factor authentication (MFA), least privilege access, micro-segmentation, and AI-driven threat detection to secure enterprise networks. While Zero Trust enhances cybersecurity, scalability, integration with legacy systems, and compliance pose challenges to its implementation.

Title: Blockchain for Cybersecurity: Decentralized Security Solutions
Name: Ashika M, Deiva Prakashini K
College: St. Joseph's College of Engineering and Technology, Elupatti, Thanjavur

Abstract:
Cybersecurity threats such as data breaches, identity theft, and ransomware are on the rise. Blockchain offers a decentralized, tamper-proof solution to enhance security in various domains. Applications include secure identity management, fraud prevention, and decentralized access control. By leveraging smart contracts and cryptographic hashing, blockchain eliminates single points of failure. However, challenges like scalability, regulatory concerns, and high energy consumption need to be addressed.

Title: AI in Software Testing: Automated Bug Detection and Fixing
Name: R Atchaya, R Akalya, A Jesika
College: St. Joseph's College of Engineering and Technology

Abstract:
Traditional software testing is time-consuming and prone to human error. AI-driven software testing automates test case generation, bug detection, and code fixes using machine learning, deep learning, and natural language processing (NLP). AI-powered tools such as Testim, Applitools, and Selenium AI improve test accuracy, reduce costs, and enhance software reliability. However, ensuring AI-driven tests remain unbiased and adaptable to code changes is an ongoing challenge.

Title: 6G Wireless Networks: The Future of High-Speed Connectivity
Name: Akshaya M, Kaviya C, Monika Varthini G
College: St. Joseph's College of Engineering and Technology, Thanjavur

Abstract:
While 5G is still being deployed, research on 6G wireless networks is already underway. 6G aims to deliver ultra-low latency (sub-millisecond), terabit-per-second data speeds, and AI-driven network optimization. It will leverage technologies like terahertz (THz) communication, quantum cryptography, and intelligent reflecting surfaces (IRS). 6G will revolutionize applications such as holographic communication, autonomous vehicles, and smart cities, but challenges like high infrastructure costs and security risks must be addressed.

PAPERS PRESENTED

Title: Artificial Intelligence in Healthcare
Name: Keerthana K, Harshini E
College: St. Joseph's College of Engineering and Technology

Abstract:
Artificial Intelligence (AI) is revolutionizing healthcare by enabling better diagnosis, personalized treatment plans, and operational efficiency. Machine learning algorithms and deep learning models are being used for early disease detection, drug discovery, robotic surgeries, and medical imaging analysis. This presentation will explore the various applications of AI in healthcare, the challenges involved in its implementation, and its potential to enhance the quality of patient care while reducing costs.

Title: Blockchain Technology and its Applications
Name: Gopika E, Devisri O
College: St. Joseph's College of Engineering and Technology, Thanjavur

Abstract:
Blockchain is a decentralized, distributed ledger technology that allows secure transactions without the need for intermediaries. Initially popularized by cryptocurrencies, its applications have expanded across industries like finance, supply chain management, healthcare, and voting systems. This presentation will cover how blockchain works, its security features, and explore its potential use cases in non-financial sectors such as digital identity verification and contract management.

Title: Cybersecurity in the Age of IoT
Name: Pongokulavasan
College: St. Joseph's College of Engineering and Technology, Thanjavur

Abstract:
The Internet of Things (IoT) has interconnected devices, improving our daily lives. However, this increased connectivity also opens new attack surfaces, making cybersecurity a critical challenge. This presentation will delve into IoT's vulnerabilities, how hackers exploit these devices, and the best practices for ensuring security. It will explore the role of encryption, authentication protocols, and emerging technologies like blockchain in enhancing IoT security.

Title: 5G Networks and Their Impact on Future Technology
Name: Karthikeyan M, Sivakumar K, Harish M
College: Velammal College of Engineering and Technology

Abstract:
5G is the next-generation wireless technology that promises higher speeds, lower latency, and more reliable connectivity compared to its predecessors. This presentation will explore the potential of 5G networks to impact various fields such as autonomous vehicles, smart cities, telemedicine, and virtual reality. It will also highlight the technical challenges, infrastructure requirements, and security concerns associated with the rollout of 5G.

PAPERS PRESENTED

Title: Edge Computing: A Revolution in Data Processing
Name: Sivasankar P, Selvaganapathy G
College: Mother Teresa College of Engineering and Technology

Abstract:
Edge computing brings computation and data storage closer to the location where it is needed, improving response times and saving bandwidth. This is particularly important for applications in autonomous vehicles, industrial automation, and smart cities. This presentation will discuss the advantages of edge computing, its differences from cloud computing, and how it supports low-latency applications in real-time data processing.

Title: Quantum Computing and its Future in Cryptography
Name: Karthikeyan, Jeffin Daniel
College: Mother Teresa College of Engineering and Technology

Abstract:
Quantum computing harnesses the principles of quantum mechanics to solve problems that classical computers cannot. One of the most critical areas impacted by quantum computing is cryptography, as it poses a threat to traditional encryption techniques. This presentation will discuss the basic principles of quantum computing, its potential applications in cryptography, and the steps being taken to develop quantum-resistant encryption methods.

Title: Natural Language Processing (NLP) in Chatbots and Virtual Assistants
Name: Ashwini, Ashwini Santhiya
College: Trichy Engineering College

Abstract:
Natural Language Processing (NLP) is a branch of artificial intelligence that focuses on enabling machines to understand and respond to human language. NLP is at the core of virtual assistants like Siri, Alexa, and Google Assistant, and it's revolutionizing customer service with chatbots. This presentation will cover how NLP works, its algorithms, challenges in language processing, and real-world applications in business and daily life.

Title: Autonomous Vehicles: Challenges and Technologies
Name: Rahini, Rahini Monisha
College: Trichy Engineering College

Abstract:
Autonomous vehicles (AVs) represent the future of transportation, relying on artificial intelligence, machine learning, and sensor fusion to navigate roads without human intervention. This presentation will explore the technologies behind autonomous vehicles, including computer vision, LIDAR, and radar, and the challenges related to safety, legal frameworks, and ethical concerns in AV deployment.
Title: Augmented Reality (AR) and Virtual Reality (VR) in Education

PAPERS PRESENTED

Title: Autonomous Vehicles: Challenges and Technologies
Name: Rahini, Rahini Monisha
College: Trichy Engineering College

Abstract:
Autonomous vehicles (AVs) represent the future of transportation, relying on artificial intelligence, machine learning, and sensor fusion to navigate roads without human intervention. This presentation will explore the technologies behind autonomous vehicles, including computer vision, LIDAR, and radar, and the challenges related to safety, legal frameworks, and ethical concerns in AV deployment.

Title: Augmented Reality (AR) and Virtual Reality (VR) in Education
Name: Arunkumar A, Madhurambal V
College: Trichy Engineering College

Abstract:
Augmented Reality (AR) and Virtual Reality (VR) are transforming the educational landscape by providing immersive learning experiences. AR and VR allow students to interact with 3D models, explore historical events, or practice real-world scenarios in a controlled virtual environment. This presentation will explore the current applications of AR and VR in education, the technology behind them, and the future potential for enhancing learning outcomes.

Title: Big Data and its Role in Business Decision Making
Name: Asha R, Bhuvana S
College: Tagore Institute of Engineering and Technology

Abstract:
Big Data refers to vast amounts of structured and unstructured data that can be analyzed to uncover patterns, trends, and associations. Businesses can leverage big data analytics to make informed decisions, improve customer experience, optimize supply chains, and boost marketing strategies. This presentation will discuss the importance of big data, the tools used for analysis, and its impact on business decision-making processes.

Title: Cloud Computing: Benefits and Challenges
Name: Karthikeyan M, Mohamed Aashik I
College: Tagore Institute of Engineering and Technology

Abstract:
Cloud computing has revolutionized IT by providing scalable, on-demand access to computing resources such as storage, processing, and applications. This presentation will cover the benefits of cloud computing, including cost savings, flexibility, and collaboration. It will also address the challenges, including security concerns, data privacy, and vendor lock-in, that organizations face when adopting cloud solutions.

Title: Robotic Process Automation (RPA) in Business Operations
Name: Gokul M, Vignesh R, Abishek Winston I
College: Mohamed Sathak Engineering College

Abstract:
Robotic Process Automation (RPA) involves automating repetitive tasks using software robots to reduce manual labor and enhance efficiency. RPA is being increasingly applied in areas such as customer service, HR, finance, and supply chain management. This presentation will explore how RPA works, its benefits, use cases in various industries, and the future impact of automation on the workforce.

PAPERS PRESENTED

Title: Machine Learning Algorithms and Their Applications
Name: Tharanetharan S, Abhishek P
College: Trichy Engineering College

Abstract:
Machine learning (ML) algorithms are at the heart of many modern technologies, including predictive analytics, speech recognition, and image processing. This presentation will provide an overview of various machine learning algorithms, such as decision trees, neural networks, and support vector machines. It will also cover how these algorithms are applied across industries like finance, healthcare, and marketing.

Title: Safeguarding IoT Networks from Security Threats
Name: Mohan Viknesh, Mohamed Yasar Arafath
College: Trichy Engineering College

Abstract:
The rapid growth of the Internet of Things (IoT) has revolutionized industries such as healthcare, smart cities, transportation, and home automation. However, the increased connectivity of IoT devices has introduced significant security vulnerabilities, making them attractive targets for cyberattacks. This paper explores the key security challenges in IoT networks, including weak authentication mechanisms, data privacy concerns, unsecured communication protocols, and the risk of botnet attacks (e.g., Mirai). Additionally, it examines the role of artificial intelligence and blockchain in enhancing IoT security. The paper concludes by proposing best practices and future research directions to mitigate security threats and ensure a safer IoT ecosystem.

Title: AI-Powered Threat Detection in IoT
Name: Nithya Darshini, K Vishalini
College: Tagore Institute of Engineering and Technology

Abstract:
With the increasing adoption of IoT devices, security threats have become a major concern, as traditional security measures struggle to handle the scale and complexity of connected networks. Artificial intelligence (AI) is emerging as a powerful tool to enhance IoT security by enabling real-time anomaly detection, predictive threat analysis, and automated response mechanisms. This paper explores how AI-driven techniques, such as machine learning and deep learning, can detect cyber threats in IoT environments. It also discusses the challenges of implementing AI in IoT security, including data privacy concerns, resource constraints, and the need for continuous learning models. The study concludes with future research directions and best practices for integrating AI into IoT security frameworks.

Title: Blockchain for Securing IoT Data Transactions
Name: Leema Josephine
College: Mohamed Sathak Engineering College

Abstract:
The increasing interconnectivity of IoT devices has led to concerns about data integrity, privacy, and security. Traditional centralized security architectures are often insufficient to address these challenges due to scalability and single-point-of-failure risks. Blockchain technology offers a decentralized and tamper-resistant solution for securing IoT data transactions. This paper explores the integration of blockchain with IoT, highlighting its benefits in authentication, data encryption, and trust management. Additionally, it discusses challenges such as high computational costs, scalability limitations, and energy efficiency issues. The study concludes by analyzing recent advancements and potential future applications of blockchain in creating a more secure IoT ecosystem.

Say it in Words

ஜெயிக்கப் Techquest '24

பிறந்தவன்!

நண்பா !
நீ ஜெயிக்கப்
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எடு
உன்னுள் இருக்கும்
நம்பிக்கை
என்னும் வலிமையான
ஆயுதத்தை
பிறர் திட்டித்திட்டியே
அது
வலுவிழந்திருந்தாலும் !
நீ
தட்டித்தட்டியே
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எழுப்பிவிடு
இயலாமை எனும்
உணர்வால்
நீ தலைகுனிந்து
இருந்தாலும்
ஒரு துளி
நம்பிக்கையோடு
எழுந்திடு
வென்றிடலாம்
இவ்வையகத்ததை.

By

RAHUL P
II Year CSE

The Healthy College Life

Tips for Adjusting to Your New College Life

When you head off to college, you'll be making a lot of changes in your life that you might not have expected. Try some of the tips below to adjust to your new life and avoid becoming discouraged or overwhelmed.

Your life changes completely when you head off to college. Instead of having parents around to remind you to do your homework and get a decent amount of sleep, you're suddenly completely on your own, with a lot of freedom and a whole new world of opportunities to embrace. These tips can help you ease the transition into college life.

Be Open to New Experiences

New place. New roommates. New situations. Everything is different when you first get to college. A surefire approach to handling these changes is to be open-minded. Expect new changes and situations to take place regularly and be open to meeting new people and listening to different points of view. College isn't just about learning facts and theories from textbooks. A large part of college involves exploring new subjects, finding friends and meeting people from different backgrounds.

Connect with Your Peers

You might be in a new and strange place, but you're not alone. Strike up a conversation with the person sitting next to you in class or talk to the people who live in your dorms. Don't stress about forming friendships right away, it will probably take some time before you find the right crowd for your personality and interests. In the meantime, enjoy meeting new people and get used to reaching out to others.

Join a Group

One way to make college feel more like home is to do some of the activities you enjoy or find clubs that meet your interests. College campuses are filled with student clubs and organizations, club sports teams and other groups, so chances are good you'll find one that fits your needs.

Manage Your Time

It's easy to get carried away with all the extra-curricular activities available on campus, but don't forget that you also have to study. Review your syllabi or ask your instructor to find out the deadlines for assignments and exams in each of your courses then use an online (or paper) calendar or planner to keep track of those deadlines. Be sure to schedule in time to study, so that you don't wait until the last minute - a practice that doesn't work so well in college.

Take Care of Yourself

It's easy to get overwhelmed with all the things you need to get done in college, and you can get stressed out if you're doing too much and not leaving any time for yourself. Being overstressed or tired can lead to illness or exhaustion. Make sure you get enough sleep while you're in college, and try to schedule in time to relax or exercise.

Submitted by

SHAMINI C.
II Year CSE

நட்பு

நண்பன்!!!
வாழ்க்கை எனும் பெருங்
கடலை
கடந்திட நீ ஓர்
துடுப்பானாய் நண்பா!
தோல்வி காண்கையில்
தோல் கொடுக்க
நீயின்றி பறர் உண்டோ?
மகிழ்ச்சி எனும்
தேனருவியில் நாம்
நனைந்த நாட்கள்
அழியாத சுவடுகள்
நம் வாழ்வின்!
நட்பு எனும் மூன்றெழுத்து
சற்றும் மிஞ்சி
மூவுலகை தோழமை
எனும் அடைமொழியில்
என்றும் உன் நட்பன்றி
நானில்லை நண்பா!!

Submitted By,
Mahalakshmi
III Yr CSE

வெற்றி நிச்சயம்

வாழ்க்கை என்னும்
தூண்டிலில்
மீனாய் அகப்படுவதை
விட அந்தத்
தூண்டிலை நாம்
போட ஆரம்பித்தால்
வெற்றி நம் கையில்.

Submitted By,
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A Quick History of Adobe Photoshop & Cool Facts Behind the Living Legend

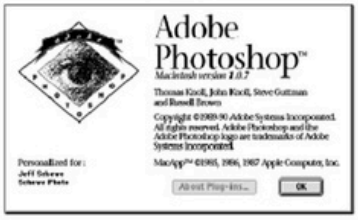
We all love Photoshop. It has done wonders for all designers, photographers and hobbyists by providing a one-program solution for all the design needs. It is very flexible, easy to use and readily available. Its tools are so perfectly fitting for all the design needs, you'll never look for another! This is the main reason why we all love this amazing program, right?

Tom's brother John, who works at Industrial Light and Magic, saw the program. Being a photo-enthusiast, John persuaded his brother to turn it into an image editing software. He eventually finished it after taking a six-month break from his studies. Tom tried to call it ImagePro (image, if this was pursued, we will all say, I ImagePro-ed my photo). Good thing was, the name was already taken for copyright so he opted to call it Photoshop (version 0.07). Tom eventually managed to sell it to a scanner manufacturer.

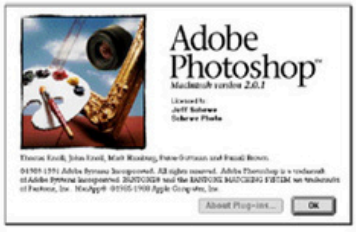
But behind all of these quirky features, do we all know where it all began? Do you know the history of Adobe Photoshop? Aren't we all curious where our favorite software came from? Who made it? Well, this calls for a history lesson.

The tale began in 1987 when PhD student Tom Knoll wrote a graphics application in a Macintosh Plus. The software was used to display gray scale images on a monochrome display. Knoll called it 'Display.' We could now consider Display as the unofficial father of our beloved Photoshop.

Photoshop's Early Versions



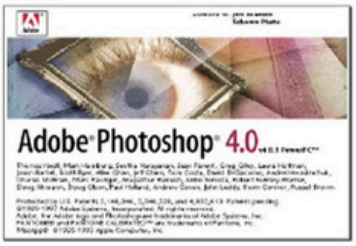
On September 1989, everything changed for Photoshop when Adobe bought it. A year after, on February 1, 1990, Photoshop 1.0 was released. It included digital color editing and retouching. It was dedicated for use in high-end platforms such as the SciTex and costs $300 the for basic photo retouching.



Photoshop improved its features as it was set for version 2.0. And so it was, on June 1, 1990 when Photoshop released its second version adding Paths, CMYK color and the Pen tool. We attribute much of the Pen tool to a guy named Mark Hamburg. Version 2.5 was later released in November as it addressed for the first release of the Windows OS. Photoshop also added palettes in this version.

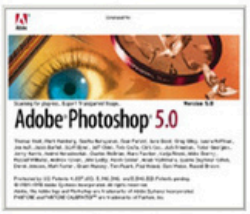
In 1994, Photoshop 3.0 was released. This version now included layers. This saved the arses of a lot of designers who loved to add a more complex feel in their creations. Tom Knoll was the man who made all these possible.

It took two years for Photoshop to release version 4.0, which added adjustment layers and macros. Imagine if Photoshop developers haven't thought of these, we will still take a very long time to put watermark on our photos. They made life easier. Also, 4.0 also started the user interface we all see today.

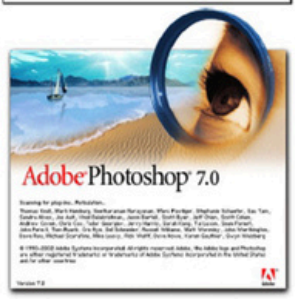


On May 1 1998, version 5.0 came out featuring its newest functions the editable type and the ability to undo actions various times using the History palette. Area selection was

also made easier with the addition of the magnetic lasso tool. A year later, 5.5 came out and added the Save for Web feature. (Thanks to 5.5 we can export PNGs!)



As the new millennium dawned, Photoshop 6.0 came out. Vector shapes were featured in this version. The type tool was also revolutionized by adding a feature where you can directly type text even without defining a bounding box to it. Blending options were also added.



Two years later came 7.0, which introduced a new file browser that allowed the users to easily look through folders. Brushes were also added together with the patch tool.

Creative Series Era

As Photoshop continued to evolve, it came with cooler and cooler features. This was marketed into a vast pack of software in which Photoshop was the leading brand. It was called the Creative Suite. It basically catered to all design needs, ranging from graphic design to layouting, photography to film.

Photoshop CS (or Photoshop 8.0) was the first version to come out in 2003. It had a Counterfeit Deterrence System (CDS), which reused duplication of paper currency. With the release of CS came also scripts and languages. Grouping of layers was also introduced in this version, making the usage of the program easier.

Meanwhile, in 2005, CS2 came out. This version added the red-eye removal tool, and vanishing point tool. Smart objects, which allowed users to blow up or trim down images without it loosing quality, was also introduced.

With the release of CS3 in 2007, speed was the major change. CS3 optimized changes with the tools. It made the navigation and usage of Photoshop faster and easier. Adobe Camera Raw and the Quick Selection Tool were also introduced.

In 2008, CS4 came out. It was evident that panning and zooming were made easier. Mask and Adjustment panels were also included which made Masking easier.

After two years, in 2010, Photoshop released CS5. It added the Puppet Warp Tool, Bristle tips, Mixer Brush and Automatic Lens correction. Masking was improved further.

At last, on May 7, 2012, CS6 came out with a very new and darker UI. It included newer features like autosaving, patch and move tools, blur gallery and vector shapes with dotted or dashed strokes.

Creative Cloud

As you are reading this article, Adobe is already on the process of refining the software. One of the major innovations we have had is the Creative Cloud series. This is a service from the Adobe Systems which gives users access to the company's design software.

Conclusion

Looking back into Photoshop, we will see how a simple idea can evolve into a useful and impacting tool. Without the Knoll's display, we would not have our favorite software, right? This just proves that Photoshop, like us web designers, can evolve and be better. We continue to remove our bugs, improve our tools (and sometimes redesign our UI) to become better people. And, hopefully, like Photoshop, we will emerge as successful web designers.

Submitted by
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AP/CSE

SORRY just it's a simple word
We repeat so often that
We've forgotten its meaning
What does this word **SORRY** mean?

SORRY I'm late; I didn't prepare
Next day too say the same
How can be **SORRY!**
When, we don't know the meaning of **SORRY**
"**SORRY** should come from the depth of the heart"

SORRY I dispensed for a patient
But my **SORRY** can't make that
Dead man alive
SORRY is not a remedy for anything

SORRY as I've learnt
Not just a word you say
To save you're skin, instead, it means
I regret having done such a thing
And won't repeat the same

SORRY has its meaning
I hope you too've under stood
And don't keep saying it
Unless you really mean it

SORRY for wasting your time
If you don't like my "**SORRY**"

By
BOSE KUMAR A
IV Year CSE

We bunk our classes,
To get movie passes.

We want our date for a lunch,
Which results in our financial crunch.

We wish to get rid of file completion,
During the time of culprit submission.

We wonder to get a nice placement,
But step down watching their criteria management.

We go for a strike at least once in a semester,
And hate to follow the rule of brothers and sisters.

We avoid wishing good morning at all,
Still don't feel any shame and walking very tall.

We do mistakes,
But no faculty have the power to trace,
How could they,
When they don't recognize us by our face.

Watching us in VIVA,
Our HOD gets amazed,
Tell us politely-
' This is the first time you have faced.'

In this way we enjoyed life in our college days,
Just make sure buddies,
It's not less than any period of golden days.

Submitted By
SANJAYKUMAR V.
IV Year CSE

காணவில்லை"
இன்று ஏனோ
உன்னை
காணவில்லை'
காரணம் ஏதும்
தோன்றவில்லை'
காணாமல்
செல்லவும்
மனமில்லை'
என் இன்பம்
உன் நிறம்
பார்த்தே
மலர்ந்தது'
என் துன்பம்
உன் முகம்
பார்த்தே
மறைந்தது'
என் மனம் உன்
அழகைப்
பார்த்தே
விரிந்தது'
என் விழிகள்
உன் வடிவம்
பார்த்தே
விரிந்தது'
உன்னுடன்
உலா வரும்
தோழிகள்
யாவரும்
இங்கிருக்க
நீ – மட்டும் எங்கு
சென்றாய்'..?
தேடுகிறேன்
உன்னை -
இன்று
அமாவாசை
என்பதையும்
மறந்து..

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COOL TECH FACTS

In a world run by Internet connectivity for all aspects of life, from efficient work operations and management to social networking connections, it is no surprise that information is the foundation of our collective future.

That being said, here are some quirky facts about technology that you may find surprising.

1. Ninety-one percent of all adults have their mobile phone within arm's reach every hour of every day.

3. There are 6.8 billion people on the planet and 4 billion of them use a mobile phone. Only 3.5 billion of them use a toothbrush.

4. Hewlett Packard, Microsoft, as well as Apple have one not so obvious thing in common – they were all started in a garage.

5. Every minute, 100 hours of video are uploaded on YouTube by individual users.

6. There are 975 million mobile subscribers within the India alone, and numbers are quickly growing.

7. 1.7 million tons of old computers and other technology devices are trashed in the India each year.

8. Ninety percent of text messages are read within three minutes of being delivered.

9. The average 21 year old has spent 5,000 hours playing video games, sent 250,000 e mails, instant messages, and text messages, and has spent 10,000 hours on a mobile phone alone.

11. WhatsApp growth continues with 700million users sending 30billion daily messages.

12. Since the company's inception, there have been 144.7 million individual visitors to Facebook, making it the most visited social networking site as of June 2013.

13. The first mouse was invented by Douglas Engelbart in 1963; it consisted of a hard wooden shell and two clunky metal wheels.

14. Of the 60 billion emails that are sent on a daily basis, 97 percent are considered spam.

15. The first cell phone sold in the United States – the Motorola DynaTAC 8000X – was designed by Rudy Krolopp in April of 1984. It weighed 900gm.

16. Google handles an estimated 1 billion search queries each and every day, releasing almost 200 tons of CO_2 per day.

17. There are 500 apps added each day to the Windows Phone Store.
And most importantly…

18. The man known as the Father of Information Theory, Claude Shannon, invented the digital circuit – the foundation of the magic that provides us all access to the Internet today - during his master's degree program, when he was just 21 years old.

Submitted by
SURYA M
II Year CSE

வெற்றியை நோக்கி

தோல்வி என்ற
படியில்
வீழ்வதைவிட
வெற்றி எனும்
படியை
தேடிச்
செல்வோம்!!!

ANBU RAJA T
II Year CSE

உலகம் ஒரு நரகம்

விழிகள் வியந்து பார்த்த மின்னல் காட்சிகள்

விண்ணில் தோன்றி மறைந்தன!

மறைந்த நொடியில் வந்த வாழ்க்கை காட்சிகள்

மறந்து விட்டதையும் தெரிய வைந்தன!

வாழ விடாமல் நின்ற கரங்கள் இன்று

இறுதி வாழத்துக்காக மலர் ஏந்துகின்றன!

அந்நொடியில் மனம் குளிர்ந்த மறுநொடியே

வானதுதரின் அழைப்பு வாழத்துக்கயோடு கிடைத்தன!

முடிவு வந்ததும் கடவுளிடம் சென்றதும்

கண்களால் ரசிக்க கிடைத்த அந்த உலகம்

புரியும் ஓர் நரகமென்று.

By
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AMAZING ANSWERS IN NUMBERS

297*3367=999999

33*3367 =111111
66*3367 =222222
99*3367 =333333
132*3367=444444
165*3367=555555
198*3367=666666
231*3367=777777
264*3367=888888

1*8+1=9
12*8+2=98
123*8+3=987
1234*8+4=9876
12345*8+5=98765
123456*8+6=987654
1234567*8+7=9876543
12345678*8+8=98765432
123456789*8+9=987654321

Submitted By,
J Britto

SEWAG ANTRO.J
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Mount Zion

College of Engineering & Technology

(Approved by AICTE, Affiliated to Anna University & Accredited by NAAC with A+ Grade)
Lena Vilakku, Pilivalam P.O, Thirumayam TK, Pudukkottai - 622507.

Degree Programmes

- B.E. Civil Engineering
- B.E. Computer Science & Engineering
- B.E. Electrical & Electronics Engineering
- B.E. Electronics & Communication Engineering
- B.E. Mechanical Engineering
- B.Tech. Artificial Intelligence & Data Science
- B.Tech. Information Technology
- M.E. Computer Science & Engineering
- M.E. Communication Systems
- Master of Business Administration

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