PANIMALAR
ENGINEERING COLLEGE

An Autonomous Institution

Affiliated to Anna University, Chennai

(JAISAKTHI EDUCATIONAL TRUST)

"YOU ONLY LIVE ONCE, BUT IF YOU DO IT RIGHT, ONCE IS ENOUGH."

—Mae West

FUERZA'25

DEPARTMENT OF ECE

MAGAZINE EDITORS

FACULTY COORDINATORS

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ASSOC.PROF/ECE

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II-ECE

ABOUT PANIMALAR ENGINEERING COLLEGE

Our esteemed Panimalar Engineering College is a functioning under Jaisakthi Educational Trust. Our institution mainly focuses on disseminating knowledge coupled with discipline and ethics. Our college has gained an teaching, plush infrastructure, expert professional body, scrum palicious regimen and also in emphasizing discipline. Our Institution also takes care to impart updated and high quality Technical Education throughout the year making them competent to face the challenges of leading corporate firms amidst harsh competition and in total, excelling in their chosen career fields.

Students are transformed into vibrant personalities with robust confidence and sound character striving for perfection, morality, perseverance and commitment. Our college merges simulating environment with skilled professionals to mould the young minds into the accomplished future generation of tomorrow.

ABOUT THE DEPARTMENT

Panimalar Engineering College affiliated to Anna University, Chennai, is established in the year of 2000. The college is recognized with the department named Electronics and Communication Engineering (ECE) which offers both Under Graduate and Post Graduate courses. The main focus of the ECE department is to impart the world class standard of technical education in the field of Electronics and Telecommunication for the benefit of the society.

The students of both UG and PG are well qualified to meet the demands of the Industry and Research Organization. Our department is equipped with eminent faculty members who are expertise in various technical domains. The total strength of regular teaching faculty members in the department is 72, of which 33 of them are doctorates and all the remaining staff members are qualified with Masters Degree. The research activities are carried out by a group of expert research members.

Emphasis elemental knowledge of the subjects Provide exposure to the emerging technology. Inculcate a strong research and development activities.

Vision of Department of Electronics and Communication Engineering

To provide world class quality education and excelling research activities in Electronics and Communication Engineering with strong ethical values and social challenges.

Mission of Department of Electronics and Communication Engineering

M1: To impart high quality technical education by investing in faculty development and resources.
M2: To adapt best teaching and learning process with strong state of art facilities for academic and research activities.
M3: To enhance national and international collaborative activities for evolving indigenous technological solutions to meet social needs, nurture leadership and entrepreneurship qualities with ethical means.
M4: To facilitate partnership with leading core industries and R&Ds for global outreach.

PEOs ofthe ECE Program

PEO1: Core Competencies

To prepare the graduates in fostering Electronics and Communication Engineering principles to provide socially relevant and sustainable engineering solution.

PEO2: Professional Integrity

To gain adequate knowledge to become good professional in Electronics and Communication Engineering associated industries, higher education and research.

PEO3: Research & Global Responsibilities

To prepare graduates in an area of specialization, ethically develop innovative and research oriented methodologies to enhance the adaptability of technological and social challenges.

Program Outcomes (POs)

PO1: Engineering Knowledge:

Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem Analysis:

Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/Development of Solutions:

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct Investigations of Complex Problems:

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage:

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society:

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and Sustainability

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics

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

PO9: Individual and Team work:

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication:

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project Management and Finance:

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-Long Learning:

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes

PSO1: Graduates should demonstrate an understanding of the basic concepts in the primary area of Electronics and Communication Engineering, including: analysis of circuits containing both active and passive components, electronic systems, control systems, electromagnetic systems, digital systems, computer applications, and communications

PSO2: Graduates should demonstrate the ability to utilize the mathematics and the fundamental knowledge of Electronics and Communication Engineering to design complex systems which may contain both software and hardware components to meet the desired needs.

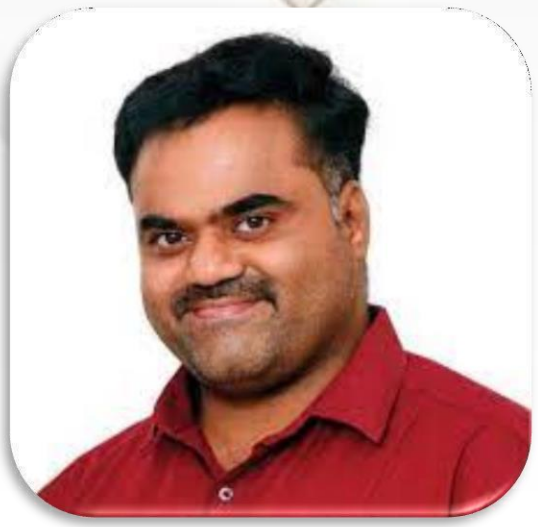
PSO3: The graduates are capable of excelling in Electronics and Communication Engineering industry/Academic/Software companies through professional careers.

MESSAGE FROM SECRETARY

Dr.P.Chinnadurai, M.A., M.Phil, Ph.D
Secretary & Correspondent, Panimalar Group of Institutions

I feel extremely delighted to observe that in Electronics and Communication Engineering department of our college is bringing out a magazine with dedicated and commited efforts of the faculty and the reflection of creativity of students, involved in the multifarious activities. I congratulate the efforts of the members of Editorial Board that they have brought out this issue of the magazine. This magazine will showcase the strength of this college

MESSAGE FROM DIRECTOR



Dr. C. Sakthi Kumar M.E., Ph.D.

Director of Panimalar Group Of Insttitutions

Panimalar Engineering College has made tremendous progress in all areas, crossing several milestones within a very short span of time. I am happy to know that the students and faculty of ECE department of PEC are bringing out magazine which is intended to bring out the inherent literacytalents in students and teachers and also to inculcate leadership skills among them . I am confident that this issue will send a positive signal to our staff community, students and peoplewho are interested in the educational and literacy activities.

MESSAGE FROM PRINCIPAL

Dr. K.Mani, M.E, Ph.D

Principal, Panimalar Engineering College

I congratulate the department of ECE, Panimalar Engineering College for bringing out their department's Technical magazine. I'm sure that this magazine will definitely provide a platform to the students and faculty members to expand their technical knowledge, sharpen their hidden talent and strengthen their thoughts to work hard to pursue their commitments I wish this to be a historical document of all your team work.

MESSAGE FROM HOD

Dr.S.RAJAKUMAR M.E, Ph.D.

Professor and Head of the Department

Electronics and Communication Engineering

IT IS WITH GREAT ENTHUSIASM THAT I BRING TO YOUR ATTENTION THE EXTRAORDINARY ACCOMPLISHMENTS

AND PIONEERING INITIATIVES UNDERTAKEN BY OUR ACCOMPLISHED STUDENTS, DEDICATED EDITORIAL TEAM, AND ESTEEMED FACULTY MEMBERS IN THE FUERZA '25 MAGAZINE. WITHIN THESE PAGES,

YOU WILL WITNESS THE INCREDIBLE IMPACT OF OUR ECE DEPARTMENT, FROM AVANT-GARDE RESEARCH TO THE LATEST TECHNOLOGICAL ADVANCEMENTS. PREPARE TO BE INSPIRED, ASTOUNDED, AND MOTIVATED TO EXPLORE NEW FRONTIERS OF POSSIBILITY IN THIS HISTORIC FIRST EDITION.

EMBARK ON THIS CAPTIVATING JOURNEY, AND LET YOUR ENTHUSIASM FOR THE FIELD OF ELECTRONICS REACH NEW HEIGHTS!

Quantum Computing:

A Glimpse into the Future Definition: Quantum computing leverages quantum mechanics principles to solve complex problems beyond the capabilities of classical computers.

Key Principles: Superposition: Qubits can exist in multiple states (0, 1, or both simultaneously), unlike classical bits (0 or 1). Example: Think of a coin spinning in the air versus lying flat on heads or tails. Entanglement: Qubits become linked; measuring one instantly determines the state of the other, regardless of distance. Analogy: Two coins flipped at the same time always landing on opposite sides. Potential Applications: Drug Discovery: Simulating molecular interactions to accelerate drug development. Example: IBM's work on simulating the structure of lithium hydride (LiH). Materials Science: Designing new materials with specific properties. Financial Modeling: Optimizing investment portfolios and risk management. Example: JPMorgan Chase using quantum computing to enhance trading strategies. Future Outlook: Near-Term: Hybrid classical-quantum algorithms for specific problems.

AI Personal Assistants: Revolutionizing PRODUCTIVITY AND EFFICIENCY

Market Size and Growth: The AI personal assistant market is projected to reach $48.4 billion by 2027, growing at a CAGR of 32.4% from 2020.Key Players: Leading companies include Amazon (Alexa), Google (Assistant), Apple (Siri), and Microsoft (Cortana), each holding significant market share.

Core Functions: AI assistants handle tasks like scheduling, reminders, information retrieval, communication, and smart home control. Productivity Gains: Studies show AI assistants can improve productivity by 20-30% by automating routine tasks and providing quick access to information. Cost Savings: Businesses can reduce operational costs by up to 25% by deploying AI assistants for customer service, data analysis, and employee support. Healthcare: AI assistants schedule appointments, manage patient records, and provide medication reminders, reducing administrative burdens and improving patient outcomes. Finance: They offer personalized financial advice, monitor spending habits, and automate transactions, helping users manage their finances more effectively. Retail: AI assistants enhance customer experience through personalized recommendations, order tracking, and automated support, increasing customer satisfaction and loyalty.

Integration Complexity: Integrating AI assistants with existing systems and workflows can be complex and require careful planning.

BRAIN-COMPUTER INTERFACES

Merging Minds and Machines Brain-Computer Interfaces (BCIs) establish a direct communication pathway between the brain and an external device. Mechanism: BCIs record brain activity (EEG, ECOG, fMRI, etc.), process the signals, and translate them into commands for controlling external devices like computers, robotic arms, or prosthetic limbs.

Restoring motor function in paralyzed individuals, Improving communication for individuals with locked-in syndrome (using eye-tracking and BCIs). Gaming & Entertainment: Controlling video games with thought . Creating immersive virtual reality experiences. Military: Enhancing soldier performance (DARPA's Next-Generation Nonsurgical Neurotechnology program). Controlling drones and other remote systems. Neuromarketing: Measuring consumer responses to marketing stimuli. Ethical Considerations: Data privacy and security: Protecting sensitive brain data from unauthorized access.

BIODEGRADABLE ELECTRONICS

Biodegradable electronics, also known as transient electronics, are an emerging technology designed to reduce electronic waste by using materials that naturally break down over time. These eco-friendly devices are made from biodegradable polymers, soluble metals like magnesium and zinc, and organic semiconductors, ensuring minimal environmental impact. Unlike traditional electronics, which contribute to toxic e-waste, biodegradable electronics dissolve in water, soil, or biofluids, making them ideal for medical implants, environmental sensors, and disposable consumer electronics. Researchers are exploring applications in temporary medical devices, such as bioresorbable sensors and drug delivery systems, as well as in sustainable packaging and environmental monitoring. As the demand for green technology grows, biodegradable electronics offer a promising solution for a more sustainable and waste-free future.

BLOCKCHAIN AND CRYPTOCURRENCY

A Single Slide Overview Blockchain: A decentralized, immutable ledger technology. Transactions are grouped into blocks, cryptographically linked, and distributed across a network. Key features include transparency, security, and efficiency. Examples: Bitcoin, Ethereum.

Cryptocurrency: Digital or virtual currency secured by cryptography. Operates independently of a central bank. Examples: Bitcoin (BTC), Ethereum (ETH), Ripple (XRP), Litecoin (LTC). Market capitalization: $2.5 Trillion USD as of late 2024.

Key Concepts: Decentralization: No single point of control. Cryptography: Secures transactions and controls the creation of new units.Mining/Staking: Mechanisms for validating transactions and adding new blocks (Proof-of-Work, Proof-of-Stake). Smart Contracts: Self- executing contracts with the terms written directly into code (primarily on Ethereum).

Applications: Beyond currency, blockchain is used in supply chain management (Walmart using blockchain to track produce, reducing tracking time from days to seconds), healthcare (securing patient data), voting systems, and digital identity. Challenges & Future: Scalability

SUSTAINABLE ENERGY SOLUTIONS POWERING A GREENER FUTURE

Climate change is accelerating, demanding immediate action. The IPCC projects a 1.5°C warming threshold breach within the next two decades under current emission trends.

Renewable Energy Sources: Solar Power: Global solar capacity reached 1 TW in early 2022. Costs have fallen by 85% in the last decade, making solar competitive with fossil fuels in many regions. Example: China added 87.4 GW of solar capacity in 2022 alone. Wind Power: Wind energy now powers more than 7% of global electricity. Offshore wind farms, like the Hornsea One in the UK (1.2 GW capacity), are increasing in scale and efficiency. Hydropower: While established, new innovations focus on minimizing environmental impact. Example: Pumped hydro storage is being integrated with renewables to provide grid stability. Geothermal: Iceland generates ~25% of its electricity from geothermal sources. Enhanced Geothermal Systems (EGS) can unlock geothermal potential in more locations. Biomass: Sustainable biomass, like agricultural residues, can provide carbon-neutral energy when managed correctly. Example: Using algae for biofuel production. Energy Storage: Crucial for intermittent renewables. Lithium-ion Batteries: Costs have fallen by 90% in the last decade. Tesla's Megapack project in California (182.5 MW / 730 MWh) demonstrates utility-scale battery storage. Pumped Hydro Storage: The world's largest energy storage capacity (~95% of total).

5G and Beyond: The Future of Connectivity

Briefly define 5G: its capabilities and current status (e.g., speeds up to 10 Gbps, low latency). State the aim of the presentation: to look beyond 5G to the next generation of wireless technology.

Limitations of 5G: Highlight limitations that future tech must solve: limited spectrum, coverage gaps, and challenges for very high-density scenarios (e.g., IoT). Mention challenges: deployment costs, power consumption.

6G Vision:

Define 6G: its expected capabilities and advantages over 5G.

Target performance metrics: speeds of 1 Tbps, sub-millisecond latency, cm-level accuracy positioning. Potential applications: immersive experiences (AR/VR), holographic communications, enhanced IoT.

Key Enabling Technologies for 6G: Terahertz (THz) Communication: Explain the use of higher frequencies for increased bandwidth. Challenges: signal attenuation, component development. Artificial Intelligence (AI) and Machine Learning (ML): How AI can optimize network performance and resource allocation. Examples: predictive resource management, intelligent beamforming. Reconfigurable Intelligent Surfaces (RIS): Use of smart surfaces to control wave propagation and improve signal coverage. Satellite Communication Integration: Integrating satellite networks for ubiquitous connectivity, especially in remote areas.

Advanced Display Technology

Micro LED: Self-emissive, high brightness (1000+ nits), high contrast (1,000,000:1), wide colour gamut (100% DCI-P3), long lifespan (100,000+ hours), module-based design for flexible sizes, used in high-end TVs and AR/VR devices. Example: Samsung "The Wall" Micro LED TV.

QD-OLED: Combines Quantum Dots with OLED, self-emissive, perfect blacks, wide viewing angles, improved colour volume, high contrast. Example: Sony A95K and Samsung S95B QD-OLED TVs.

Mini-LED: Smaller LEDs (0.2mm or less) for increased backlight zones (1000+ zones), higher contrast ratio, improved brightness, reduced blooming effect, used in high-end LCD TVs and monitors. Example: Apple Pro Display XDR, Samsung Neo QLED TVs.

Foldable/Rollable Displays: Flexible OLED or Micro LED substrates, enabling foldable smartphones, rollable TVs, and bendable displays. Example: Samsung Galaxy Z Fold series, LG Signature Series OLED R.

Computational Displays: Displays that leverage computational algorithms to enhance image quality, viewing angles, and power efficiency, uses eye-tracking and environment sensors. Example: Avegant Light Field Displays.

Holographic Displays: 3D displays using interference patterns of light, no glasses needed, early stage development with limited commercial applications. Companies working on holographic displays include Looking Glass Factory.

WEARABLE TECHNOLOGY & HEALTH MONITORING

Wearable technology has transformed health monitoring by integrating advanced sensors, artificial intelligence, and IoT to provide real-time physiological data. Devices such as smartwatches, fitness trackers, biosensors, and smart textiles continuously track vital parameters, including heart rate, blood pressure, blood oxygen levels, ECG, glucose levels, and sleep patterns. These innovations enable early detection of health anomalies, assist in chronic disease management, and enhance remote patient monitoring, reducing the burden on healthcare facilities. AI-driven analytics in wearables provide personalized health insights, predictive diagnostics, and real-time alerts, empowering users and healthcare professionals with data-driven decision-making. The growing adoption of non-invasive and biocompatible sensors has improved accuracy, comfort, and long-term usability. As wearable health technology advances, it is playing a crucial role in preventive care,

TERAHERTZS COMMUNICATION

Terahertz communication represents the next frontier in wireless technology, offering ultra-fast data transmission with minimal latency. Operating within the terahertz frequency range (0.1 to 10 THz), this advanced communication system promises seamless connectivity for next-generation applications, including 6G networks, smart cities, and immersive augmented and virtual reality experiences. Unlike traditional wireless technologies, terahertz communication uses ultra-wideband channels to achieve data rates in the terabit-per-second range, supporting massive data exchange and real-time interactions. The integration of AI and machine learning further enhances signal processing, optimizing network performance and reliability. With its potential to revolutionize industries such as healthcare, autonomous transportation, and industrial automation, terahertz communication paves the way for a hyper-connected future.

FLEXIBLE ELECTRONICS

Flexible electronics, also known as flex circuits, are a rapidly advancing technology that enables the development of lightweight, bendable, and stretchable electronic devices. Unlike traditional rigid circuits, flexible electronics use materials like conductive polymers, organic semiconductors, and thin metal films on flexible substrates such as plastic or paper. This innovation allows for applications in wearable technology, foldable smartphones, medical implants, and smart textiles, enhancing portability and durability. Industries such as healthcare, consumer electronics, and aerospace benefit from flexible electronics due to their adaptability and resistance to mechanical stress. As research progresses, improvements in materials, manufacturing processes, and energy efficiency continue to expand the possibilities of this transformative technology.

SPACE EXPLORATION AND COLONIZATION

EXPANDING HORIZONS: THE IMPERATIVE OF SPACE EXPLORATION AND COLONIZATION

EARTH'S LIMITATIONS: DWINDLING RESOURCES, ENVIRONMENTAL CONCERNS, AND EXISTENTIAL THREATS NECESSITATE EXPANSION BEYOND OUR PLANET.

SCIENTIFIC ADVANCEMENTS: SPACE EXPLORATION DRIVES INNOVATION IN MATERIALS SCIENCE, ROBOTICS, AI, AND MEDICINE, WITH POTENTIAL FOR GROUNDBREAKING DISCOVERIES.

RESOURCE ACQUISITION: ASTEROID MINING, LUNAR RESOURCES (HELIUM-3), AND MARTIAN MINERALS OFFER SOLUTIONS TO TERRESTRIAL RESOURCE SCARCITY AND ECONOMIC OPPORTUNITIES.

TECHNOLOGICAL LEAPFROGGING: COLONIZATION EFFORTS ACCELERATE TECHNOLOGY DEVELOPMENT, CREATING NEW INDUSTRIES AND HIGH-SKILLED JOBS.

HUMAN RESILIENCE: ESTABLISHING SELF-SUSTAINING COLONIES ON OTHER PLANETS ENSURES THE SURVIVAL AND DIVERSIFICATION OF THE HUMAN SPECIES IN THE FACE OF GLOBAL CATASTROPHES.

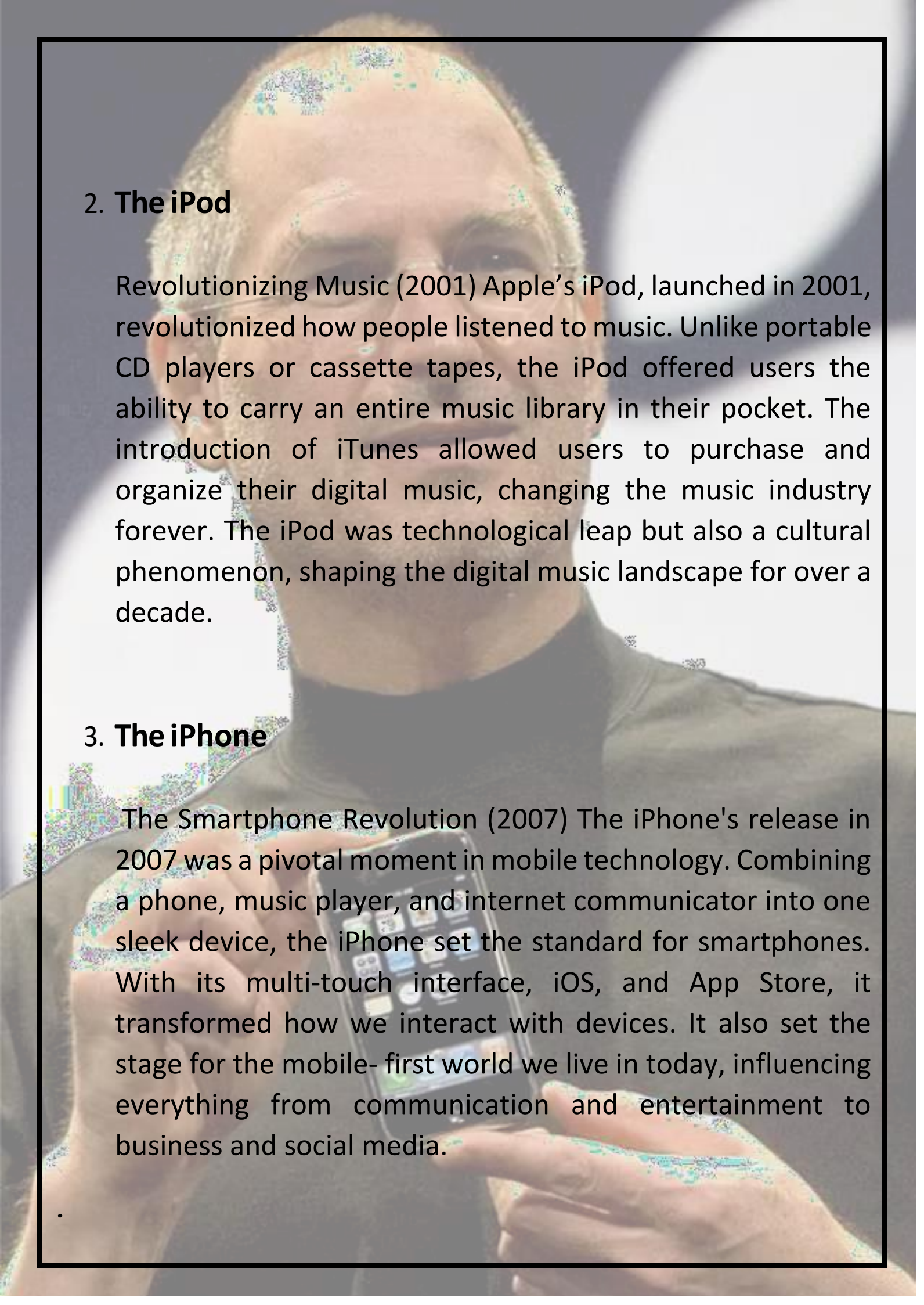
APPLE COMPANY'S CREATIVITY AND INNOVATIONS

Apple Incorporated has been a defining force in technology for over four decades. With its emphasis on sleek design, user experience, and cutting-edge technology, Apple continues to push boundaries and set the standard for the tech industry. Below, we take a closer look at some of the most transformative innovations introduced by Apple over the years.

CREATIVITY AND INNOVATION

1. **The iMac**

   A New Era in Personal Computing (1998) When Apple introduced the iMac in 1998, it broke away from the traditional, often bulky, designs of personal computers. The iMac's all-in-one, colourful design turned heads and brought a fresh perspective to computing. Beyond its aesthetic appeal, it was the first computer to feature USB ports, marking the end of legacy ports like serial and parallel connectors. The iMac helped Apple's revival, appealing to both creative professionals and the general public.



2. **The iPod**

Revolutionizing Music (2001) Apple's iPod, launched in 2001, revolutionized how people listened to music. Unlike portable CD players or cassette tapes, the iPod offered users the ability to carry an entire music library in their pocket. The introduction of iTunes allowed users to purchase and organize their digital music, changing the music industry forever. The iPod was technological leap but also a cultural phenomenon, shaping the digital music landscape for over a decade.

3. **The iPhone**

The Smartphone Revolution (2007) The iPhone's release in 2007 was a pivotal moment in mobile technology. Combining a phone, music player, and internet communicator into one sleek device, the iPhone set the standard for smartphones. With its multi-touch interface, iOS, and App Store, it transformed how we interact with devices. It also set the stage for the mobile- first world we live in today, influencing everything from communication and entertainment to business and social media.

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PHOTOGRAPHY

NAME :MONIFA PRISCA T

YEAR : III

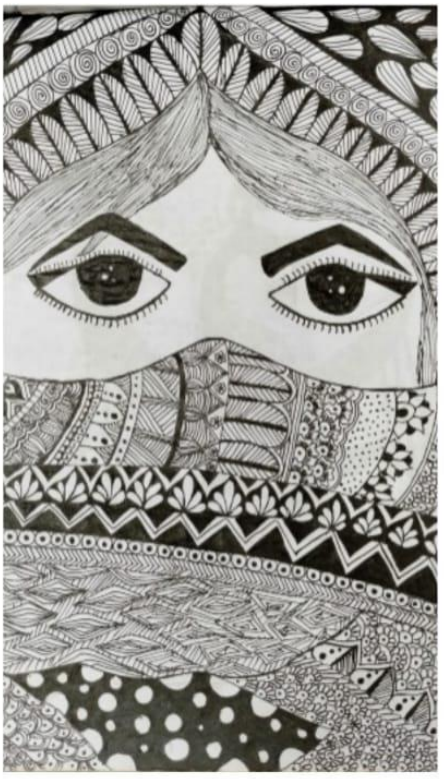
SECTION : B4

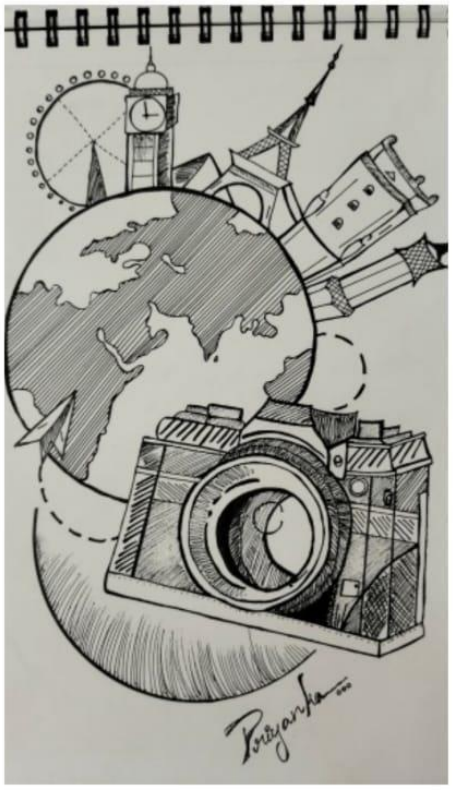
NAME :NIVETHA S

YEAR : III

SECTION : B

Drawings





NAME : PRIYANKA S.K

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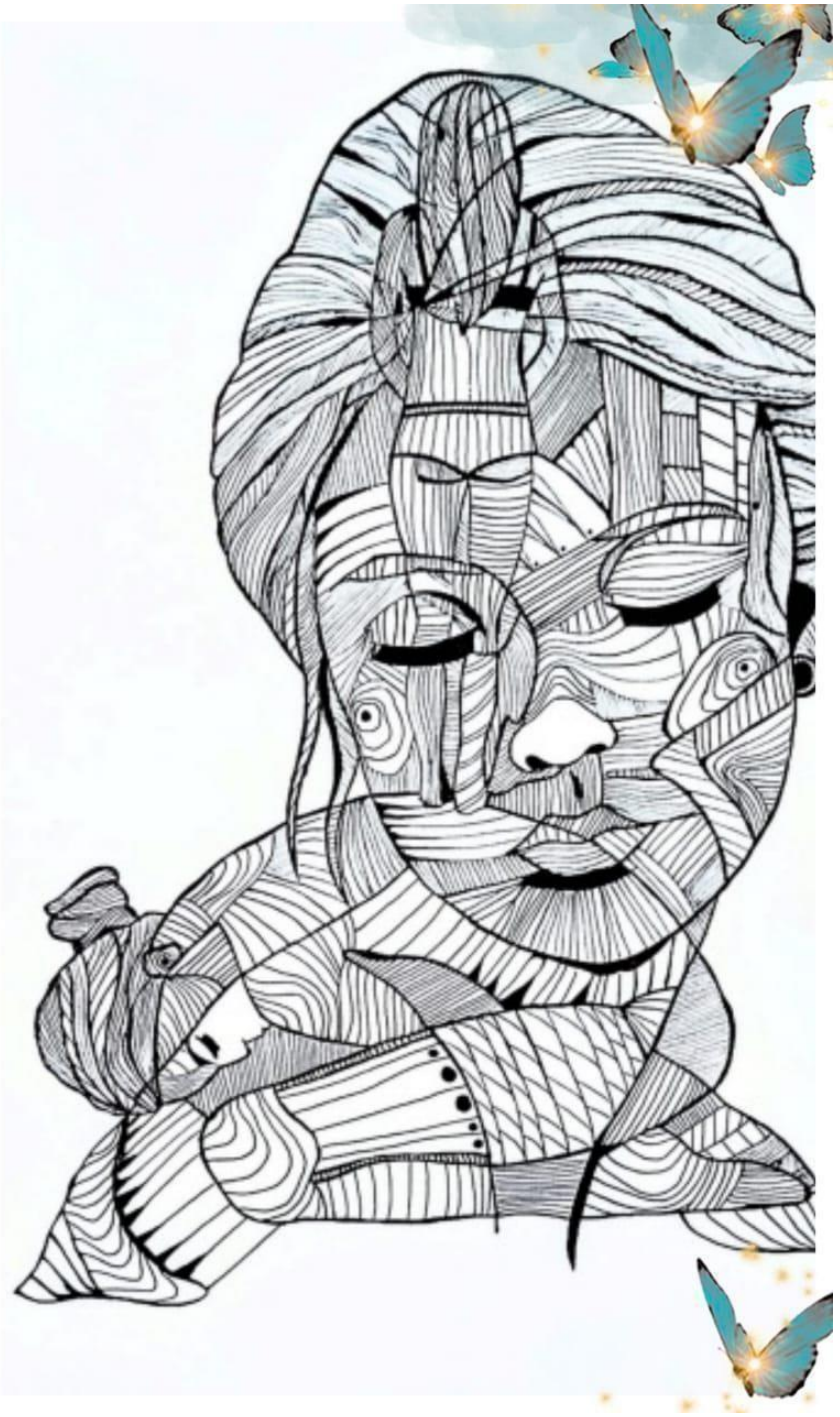


NAME :MIRUNALINI S

YEAR : III

SECTION :B

NAME :RANJANI G

YEAR : III

SECTION : B

கவிதை

நாம் அனைவரும் சமம்

அறிவை தேடும் மனதில் அச்சத்தை வீசிடாதே!

உன் சிரிப்பிற்காக ஒருவரின் உள்ளத்தை சிதைத்து விடாதே!

உருவ கேலி செய்து ஒருவரின் தன் நம்பிக்கையை உடைத்து விடாதே!

நினைத்தாலே இனிக்க வேண்டும் கல்லூரியின் நினைவுகள்

அதை நீங்காத வலிகளாக மாற்றி விடாதே!

பல உயரத்தைத் தொட வேண்டிய இளம் இதயங்கள் நாம்

அதில் வன்மத்தின் சாயலைப் பூசிவிடாதே!

பட்டப் படிப்புகள் படித்து , சட்டங்களை மதித்து நாளைய சமுதாயத்தில்

வாழ போகும் பட்டதாரியை பட்டப் பெயரிட்டு அழைக்காதே!

நம் அனைவரின் கண்களிலும் மகிழ்ச்சி மலரட்டும்!

நம் நட்பு மற்றவர்களுக்கு இலக்கணமாய் மாறட்டும்!

கேலி,கிண்டல்,தனிமைப் படுத்துதல் என்னும் இருளையெல்லாம் நீக்கி

நாம் அனைவரும் அன்போடு மனிதராக வாழ்வோம்!!!

BY

NANDHINI . A

III ECE-B

PANIMALAR ENGINEERING COLLEGE

STUDENTS ACHIEVEMENTS

Ms. Oviya S, Ms. Pandipriya B, Ms. Pavithra Malyaa K, Mr.Thivesh T of III ECE ***Won Second prize*** in Paper presentation conducted by PSG Tech, Coimbatore on 15.03.2025.

Mr. Naveen Kumar, Mr. Praveen Kumar, Mr. Prajeet A, Mr. Praveen BB of III ECE ***Won the Runner Award in the Hackathon*** Part of Techfest Ignite'25 event at Easwari Engineering College on 13.03.2025.

Team Aviator **Won the Best Innovation Award & Rs. 3000 Cash Award** at Hack -O-Holics Hackathon at St. Josephs Institute of Technology 13& 14 September 2024

Ms. HARINI M, Ms. HARSHINI J & Ms. JANAKI S of II ECE **Won the Second Prize** in IDEA SURGE event at Samarpana 2k24 event at Sri Sairam Institute of technology on 24.09.2024

Mr. Dheeraj & Team Won the IEEE SPAX Forge Up Entrepreneurship Award for Dedication and Outstanding Contribution to the event's performance from Jeppiaar Engineering College

Ms. HARINI M, Ms. HARSHINI J & Ms. JANAKI S of II ECE Won the **SECOND PRIZE** for presenting the paper titled SMART SHOPPING CART in the IETE Zonal Seminar (South) & ISF Congress – Paper Presentation event organized by IETE Chennai Centre during at Sri Sairam Engineering College, Chennai 26 & 27, July 2024.

STAFF ACHIEVEMENTS OF ACADEMIC YEAR 2025

1. **Mr. M. Arun,** Assistant Professor, ECE, **delivered the Seminar** on ***IEEE Awareness for Professional Growth and Innovation*** at Rajalaksmi Institute of Technology on 27.03.2025.

Mr. M. Arun, Assistant Professor, ECE, **delivered the Seminar** on ***Re-Engineering Life with IEEE*** at Sri Muthukumaran Institute of Technology on 27.03.2025.

5. **Mr. M. Arun,** Assistant Professor, ECE received the ***Vibrant Pilot Award*** for Panimalar Engineering College from IEEE YESIST 12 at Tunis Science Centre, Tunisia on 08.09.2024.

6. **Mr. M. Arun,** Assistant Professor, ECE, ***acted as a Resource Person*** for Quintessence NEXUS 1.0 event at Sri Sairam Engineering College on 28.08.2024.

7. **Mr. M. Arun,** Assistant Professor, ECE, ***delivered a Talk*** on IEEE Membership Benefits and Funding Opportunities at Sri Krishna College of Engineering and Technology on 23.08.2024.

8. **Mr. M. Arun,** Assistant Professor, ECE, **Inaugurated** IEEE Communication & Photonics Joint Societies of Kings College of Engineering & **delivered the Talk** on ***IEEE Membership & Funding Opportunities*** on 20.08.2024.

9. **Mr. M. Arun,** Assistant Professor, ECE received the ***Exemplary Contribution Award*** from Institute of Electrical and Electronics Engineers, Madras Section on 23.07.2024.

10. **Mr. M. Arun,** Assistant Professor, ECE received the ***IEEE MGA Young Professional Achievement Award*** 2023 from IEEE MGA.

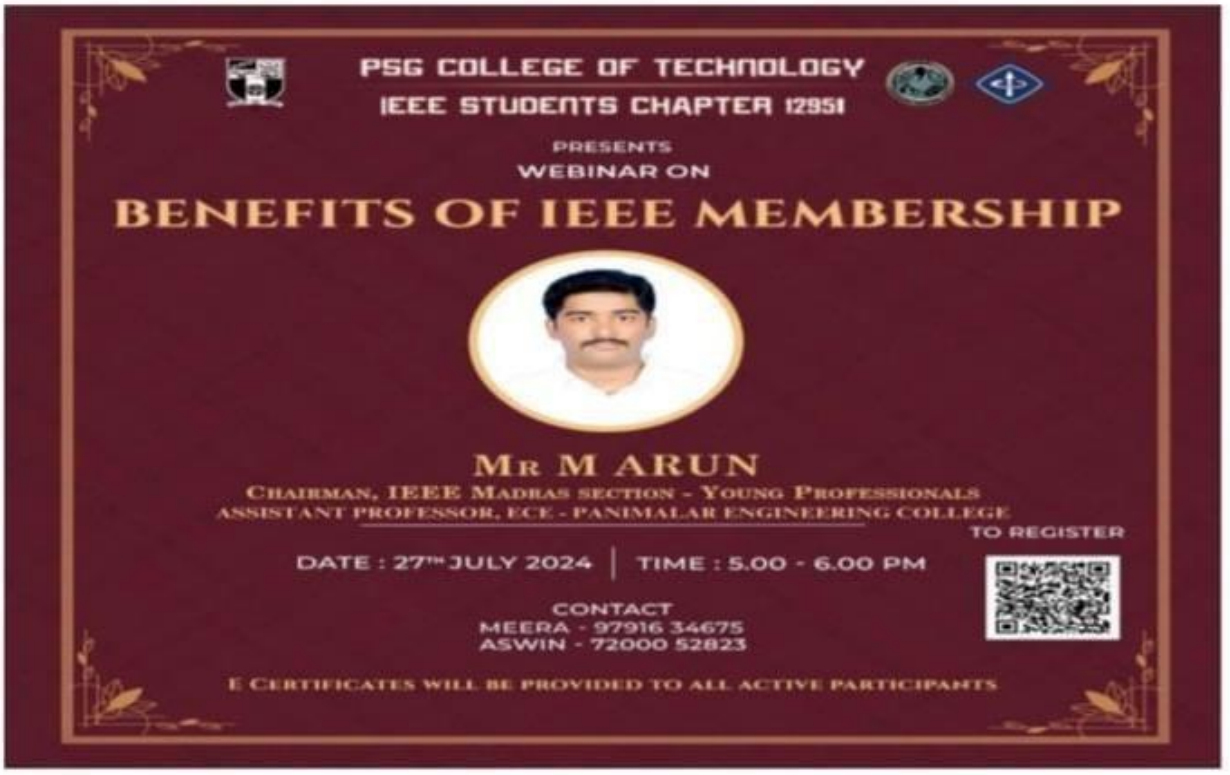
11. **Mr. M. Arun,** Assistant Professor, ECE received the ***IETE Exemplary Contribution Award*** 2022-2024 from IETE Chennai Centre in the IETE Zonal Seminar (South) & ISF Congress at Sri Sairam Engineering College on 27.07.2024.

12. **Dr. S. Deepa, Professor ECE & Mr. M. Arun,** Assistant Professor, ECE received the ***Vibrant ISF Award*** for the academic year 2022-2023 from IETE Chennai Centre in the IETE Zonal Seminar (South) & ISF Congress at Sri Sairam Engineering College on 27.07.2024.

13. **Dr. S. Deepa, Professor ECE** received the ***Best ISF Coordinator Award*** for the academic year 2022-2023 from IETE Chennai Centre in the IETE Zonal Seminar (South) & ISF Congress at Sri Sairam Engineering College on 27.07.2024.

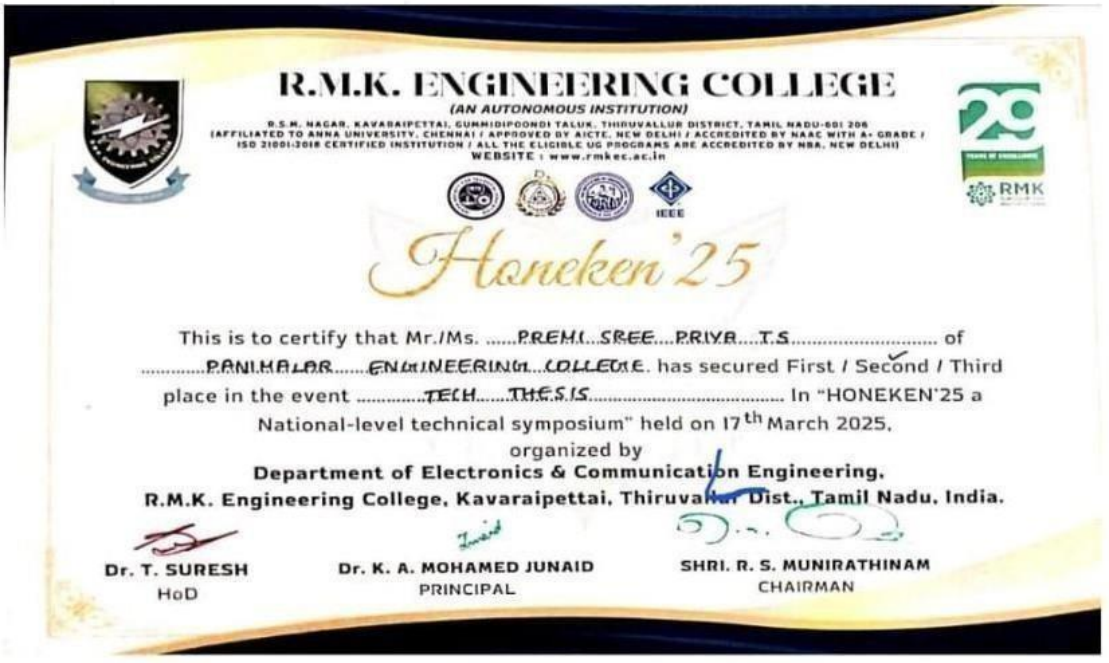
14. **Mr. M. Arun,** Assistant Professor, ECE received the ***Best ISF Coordinator Award*** for the academic year 2022-2023 from IETE Chennai Centre in the IETE Zonal Seminar (South) & ISF Congress at Sri Sairam Engineering College on 27.07.2024.

15. **Mr. M. Arun,** Assistant Professor, ECE, **delivered the TALK** on ***Benefits of IEEE Membership*** at PSG College of Technology on 27.07.2024.



16. **Mr. M. Arun,** Assistant Professor, ECE, **delivered the talk on *IEEE Membership Drive – Grab it Now*** at Sri Krishna College of Technology on 14.08.2024.

Ms. Kondru Lakshmi Sri ***Won the Second Prize with Cash Prize of Rs.1000*** in the One Piece (Tech Bug) event at R.M.K. Engineering College on 17.03.2025.



R.M.K. ENGINEERING COLLEGE

(AN AUTONOMOUS INSTITUTION)

R.S.M. NAGAR, KAVARAIPETTAI, GUMMIDIPOONDI TALUK, THIRUVALLUR DISTRICT, TAMIL NADU-601 206
(AFFILIATED TO ANNA UNIVERSITY, CHENNAI / APPROVED BY AICTE, NEW DELHI / ACCREDITED BY NAAC WITH A+ GRADE / ISO 21001:2018 CERTIFIED INSTITUTION / ALL THE ELIGIBLE UG PROGRAMS ARE ACCREDITED BY NBA, NEW DELHI)
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IEEE

Honeken'25

This is to certify that Mr./Ms. PREMI SREE PRIYA T.S of PANIMALAR ENGINEERING COLLEGE has secured First / Second / Third place in the event TECH THESIS In "HONEKEN'25 a National-level technical symposium" held on 17th March 2025, organized by

Department of Electronics & Communication Engineering,
R.M.K. Engineering College, Kavaraipettai, Thiruvallur Dist., Tamil Nadu, India.

Dr. T. SURESH	Dr. K. A. MOHAMED JUNAID	SHRI. R. S. MUNIRATHINAM
HoD	PRINCIPAL	CHAIRMAN

Ms. Premi Sree Priya T S of II ECE ***Won the Second Prize*** in the Tech Thesis Event hosted ECE dept, R.M.K Engineering College on 17.03.2025.

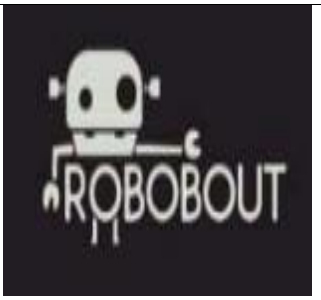
Our III ECE Students ***Won the KEC Hackathon 2025***, Kongu Engineering College, Perundurai during 10 &11.03.2025.

Mr. Hanush G, Mr. Dinesh Kumar C, Mr. Balamurugan P of III ECE ***Won the Best Project Award and Cash Prize Rs.1000*** for their Project titled Dynamic Automated Speed Limiter in ELITECCOM 2025 Project Expo - organized by IETE Chennai Centre during 20.02.2025.

LIST OF CLUBS

The Department of ECE has established various clubs, which is a significant move forward. Providing learning and career opportunities in the fields of robotics, artificial intelligence, machine learning, wireless communication, and signal processing is its main objective. These clubs seek to improve students' technical proficiency in the areas of responsibility, coordination, achievement, and technology, equipping them to succeed in a highly competitive environment.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

S. No.	Name of the Club	Club Logo
1	**Robobout Club**	

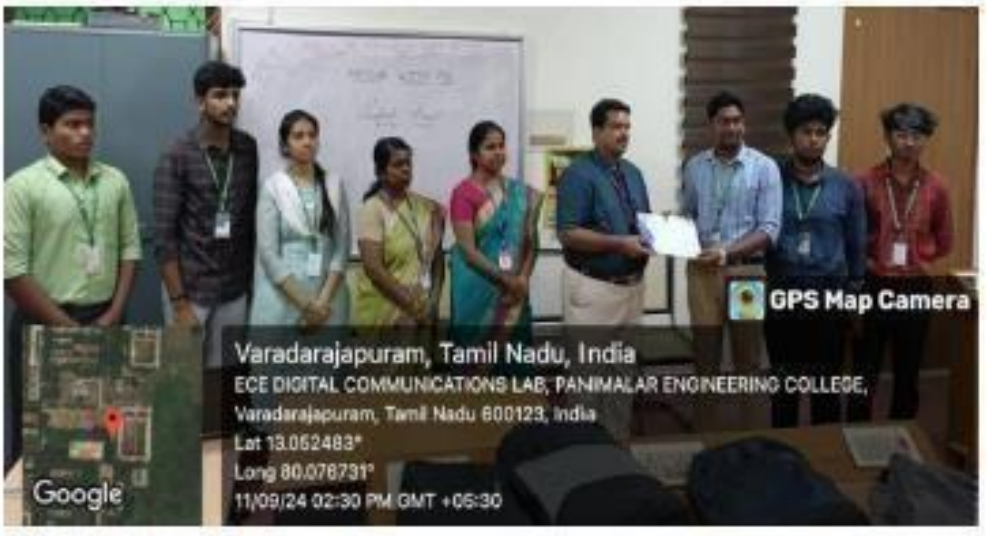
2	**Radio Club**	
3	**Artificial Intelligence Club**	
4	**Intelligence Retrieval Club**	
5	**Design Club**	
6	**Tesla Club**	
7	**Automation Club**	
8	**Signal Processing Club**	

CLUB ACTIVIYIES 2025

S.NO	CLUB ORGANISED	NAME OF THE PROGRAM / EVENT	DATE	RESOURCE PERSON / CHIEF GUEST / EXPERT DETAILS
1.	IR CLUB	Workshopon machine learning using MATLAB	24.09.2024 to 25.09.2024	Ms. Priyanka CEO of SkillX
2.	RADIO CLUB	Training on chip level testing & Debugging for all mobile devices	09.09.2024 &10.09.2024, 11.09.2024 & 12.09.2024, 18.09.2024 & 19.09.2024, 20.09.2024 & 21.09.2024	Mr. Karthi, Trainer, New Technology Mobile & Laptop Service Training Institute, Coimbatore.
3.	AI CLUB	Workshop on AI Drons and its applications	09.09.2024 to 10.09.2024	Mr. Damodaran, CEO,AVIATORQ
4.	DESIGN CLUB	Workshop on ImageProcessing using MATLAB	22.08.2024 to 23.08.2024	Dr.N.R.Shankar, M.Tech.,Ph.D.,Manager Director Technologies Avadi, Chennai
5.	DESIGN CLUB	Hands on Trainingin Web Development	21.08.2024 to 22.08.2024	Mr.MohsinAhamed Founder and CEO, Infomatronics, Chennai

6.	DESIGN CLUB	Hands on Trainingin Web Development	07.08.2024 to 08.08.2024	Mr.MohsinAhamed Founder and CEO, Infomatronics, Chennai

WORKSHOP ON MACHINE LEARNING ON WEB DEVELOPMENT



Training on Chip Level Testing & Debugging for all Mobile Devices

WORKHOP ON AI DRONES AND APPLICATIONS

WORKSHOP ON IMAGE PROCESSING USING MATLAB

HANDS ON TRAINING IN WEB DEVELOPMENT

Ms. SHANDHINI M, Ms. LOGASHREE S, Ms. LOGHITHAA G, Ms. OVIYA S & Ms. SUBHAHARINI P of III ECE presented Best Practices of **PEC WIE Affinity Group** and has secured **IEEE MAS Best WIE AG Award** in Connecting the Dots 3.0 event organized by IEEE Madras Section WIE Affinity Group at St. Joseph college of Engineering on 07.09.2024.

Mr. Jayanth & Team **Won Rs. 1000 for winning Honorary Mention award** for presenting their Paper in ECE dept. Symposium held at Dr. MGR Educational & Research Institute on 13.9.2024

Congratulations, 2nd year APTITUDE TEST Best APTITUDE contributors

YUVANTHIKA.M(ECE),

SRI SAKTHI.G(ECE),

THENMOZHI.P(MECH),

VAISHNAVI.B (AIML)

ECE TOPPERS

I YEAR / II SEM

Sl. No.	REGISTER NUMBER	NAME	GPA	CGPA	RANK	Amount (In Rs)	Cheque Number	Signature
1	211423106405	SENTHAMIL SELVAN M	9.261	9.05	I	25,000		
2	211423106084	BHAVANA L	9.217	9.26	II	15,000		
3	211423106088	BHUVANA L	9.217	9.17	III	10,000		

II YEAR / IV SEM

Sl. No.	REGISTER NUMBER	NAME	GPA	CGPA	RANK	Amount (In Rs)	Cheque Number	Signature
1	211422106361	SACHITHA SREE T C	10.000	9.22	I	25,000		
2	211422106108	DIVYAJYOTHI A L	9.864	9.19	II	15,000		
3	211422106372	SAMYUKTHA S	9.818	9.31	III	10,000		

III YEAR / VI SEM

Sl. No.	REGISTER NUMBER	NAME	GPA	CGPA	RANK	Amount (In Rs)	Cheque Number	Signature
1	211421106195	PADMA SHREE S	9.591	9.41	I	25,000		
2	211421106171	MIRUTHULA M	9.455	9.2	II	15,000		
3	211421106166	MANJU SRI M	9.318	9.41	III	10,000		

M.E I YEAR / II SEM

Sl. No.	REGISTER NUMBER	NAME	GPA	CGPA	RANK	Amount (In Rs)	Cheque Number	Signature
1	211423403003	KANISHYA A	9.182	9.50	I	25,000		

II YEAR / III SEM

Sl. No.	REGISTER NUMBER	NAME	GPA	CGPA	RANK	Amount (In Rs)	Cheque Number	Signature
1	211423106088	BHUVANA L	10	9.44	I	25,000	**II Year/ III Sem**	B.E. Electronics and Communication Engineering
2	211423106084	BHAVANAL	9.714	9.41	II	15,000	**II Year/ III Sem**	B.E. Electronics and Communication Engineering
3	211423106431	SOFIYA S	9.714	9.3	III	10,000	**II Year/ III Sem**	B.E. Electronics and Communication Engineering

III YEAR / V SEM

Sl. No.	REGISTER NUMBER	NAME	GPA	CGPA	RANK	Amount (In Rs)	Cheque Number	
1	211422106372	SAMYUKTHA S	9.750	9.40	I	25,000	**IIIYear / V Sem**	
2	211422106039	ANUSRIPRIYA S	9.750	9.27	II	15,000	**IIIYear / V Sem**	
3	211422106337	RAMYAV	9.625	9.17	III	10,000	**IIIYear / V Sem**	B.E. Electronics and Communication Engineering

IV YEAR / VII SEM

Sl. No.	REGISTER NUMBER	NAME	GPA	CGPA	RANK	Amount (In Rs)	Cheque Number	Signature
1	211421106021	AMARSRI K S	9.700	8.95	I	25,000	**IV Year / VIISem**	B.E.Electronics and Communication Engineering
2	211421106238	SAKTHI A	9.550	9.2	II	15,000	**IV Year / VIISem**	B.E.Electronics and Communication Engineering
3	211421106244	HSANJEEV KRISHNAN	9.250	9.15	III	10,000	**IV Year / VIISem**	B.E.Electronics and Communication Engineering

M.E. Communication Systems

(II YEAR/III SEMESTER)

Sl. No.	REGISTER NUMBER	NAME	GPA	CGPA	RANK	Amount (In Rs)	Cheque Number	Signature
1	211423403003	KANISHYA A	10	9.67	I	25,000	**II YEAR/III SEMESTER**	**M.E. Communication Systems**