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DEPARTMENT OF
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ENGINEERING

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UNIVERSITY COLLEGE OF ENGINEERING KAKINADA (A)
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

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EVENTS & WORKSHOPS

- **Dr. Venkata Reddy Kota**, Professor and Head of the Department of Electrical & Electronics Engineering, UCEK, JNTUK, participated in a Two-Day Awareness Session on Quantum Science & Technology, held on 26th and 27th April 2025 at JNTUK, Kakinada, in association with QETCI and NQM, focusing on advancements in quantum technologies.
- **Dr. C. Naga Kota Reddy**, Asst. Professor of EEE Dept. successfully participated in the Management Development Programme on 'How to Excel in Case Research & Case Writing' held at XIME, Bangalore on April 3rd & 4th, 2025—enhancing academic excellence and research proficiency.
- The Communication and Leadership Club of the Student Activity Centre (SAC), EEE Department, successfully organized a Group Discussion session on 26th April 2025. The event saw enthusiastic participation from 40 students of 1st and 3rd year, divided into 10 batches. Participants engaged in thought-provoking discussions on topics related to Electrical and Electronics Engineering, aiming to sharpen their communication, critical thinking, and teamwork skills.



- On 26th April 2025, the Student Activity Centre (SAC) of the EEE Department conducted a Coding Competition (Quiz) on “C Programming,” organized by the Innovation and Coding Club. I, II, III B. Tech students participated enthusiastically, showcasing their coding skills and problem-solving abilities.



- Motivated by self-initiative, third-year students **Y. Tejeswara Rao** (23025A0263), **R. D. Pavan Kumar** (23025A0264), **G. Naveen Sai** (22021A0224), **T. Mohan Krishna** (22021A0214), and **J. Mukesh Babu** (22021A0220) at the IDEA Lab developed innovative display systems. These include LED clocks, scrolling text boards, and RGB panel displays, all built using Arduino and ESP32 modules. The projects reflect their interest in exploring electronics and embedded systems beyond the academic curriculum.

ANNUAL DAY 2025 AWARDS

Endowment Prizes for 2019 Admitted Batch students

Name of the Donor (prize)	Hall Ticket No.	Name of the student
Sri Mallampati Ramesh Memorial	19021A0253	ALLA JAYA SUREKHA
Prof.G. Mallikarjuna Rao Memorial	19021A0225	KORRA VIDYA
Late Smt.V. Narasamma, Endowment Prize instituted by her husband Dr.V.Kama Raju, PEEE (Retd.)	21021D0814	SAMARNATH KURLA
Sri N. Ramachandra Rao, Endowment Prize instituted by his son Sri NVS. Rama Rao, Former Student (1959-1964) EEE	19021A0235 19021A0233	VADLAMURI ABHI SUSANT ROUTHU PAVANI
ECK 1963 Alumni Charitable Trust	19021A0253	ALLA JAYA SUREKHA

Endowment Prizes for 2020 Admitted Batch students

Name of the Donor (prize)	Hall Ticket No.	Name of the student
Sri Mallampati Ramesh Memorial	20021A0215	CHEBOLU DURGA SRAVANTI
Prof.G. Mallikarjuna Rao Memorial	21025A0257	BHEEMARASETTY POOJITHA TANMAYI
Late Smt.V. Narasamma, Endowment Prize instituted by her husband Dr.V.Kama Raju, PEEE (Retd.)	22021D0802	SOUMYA GUJJARAPUDI
Sri N. Ramachandra Rao, Endowment Prize instituted by his son Sri NVS. Rama Rao, Former Student (1959-1964) EEE	20021A0208 20021A0240	SHAIK VEESAM PALLI SAHEER BHIMLA VENKATA SURYA TRIPURA JANANI
ECK 1963 Alumni Charitable Trust	20021A0240	BHIMLA VENKATA SURYA TRIPURA JANANI

ACHIEVEMENTS

Congratulations



RANK

PODINALA MAHITHA TEJASWI

II B.TECH
23021A0237



In **Coding Competition (Quiz)** on “C programming” conducted by Coding and Innovation club, SAC



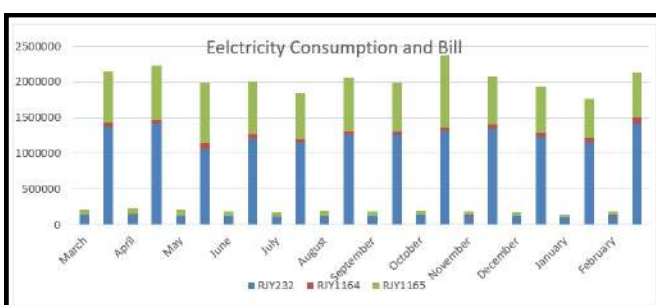
- **G. Naveen Sai** (22021A0224) and **Ch. Pragya** (22021A0217) of III B. Tech. has secured a six-week summer Internship at IIT-Bhubaneswar. This prestigious opportunity highlights their academic dedication and marks an important milestone in their professional journey.



- Final-year B.Tech EEE students are designing fitness machines that generate electricity—an exercise cycle, lat pull-down, and handle mechanism—all under the Sports and Fitness Club. This project promotes both personal health and renewable energy, showcasing smart, sustainable engineering in action.



- The Students of energy audit team have studied the energy solar pv systems in the campus, detailed observations on the status were made. The Students have analysed the power consumption and electricity bills of the entire campus during 2024-25. The Team has also participated in identification of sites and preparation of report for the installation of 1.5 MW solar pv system in the campus



SPORTS DAY 2025 ACHEIVEMNTS

JNTUK's Sports Day 2025 was celebrated with enthusiasm and high energy, bringing together students and faculty for a day of athletic excellence. The event featured a wide range of track, field, and team games, highlighting the university's focus on physical fitness and holistic growth.

The EEE department emerged as a standout, with its students delivering exceptional performances across multiple events. Their teamwork, determination, and competitive spirit earned them top honors and widespread appreciation.



Mr. Kovuri Ashok Sai (23025A0259) of III B.Tech. , president of Sports & Fitness club, SAC was appreciated for participating in All India Inter-University Power lifting competition held in University of Kashmir, Srinagar. He also secured a Gold medal in Inter-collegiate power lifting tournament held in St. Anns college of engineering and technology, Chirala.

B. Kavya (22021A0250) of III B.Tech. , Secretary of Sports & Fitness club, SAC Dominates the Track in Athletics! her outstanding performance clinched Gold in both the 1500m, 800m races and bronze in 4x100 Relay . Her speed, stamina, and dedication truly set her apart— an inspiring achievement!



Smt. J. Jyotsna, Assistant Professor of EEE Dept., actively participated in the Women Faculty Games. She secured the Runner-Up position in Chess, finished as Runner-Up in Tennikoit Doubles and also Carrom Doubles Runner-up reflecting her enthusiasm and commitment to sportsmanship.

Mr. Ch. Venkatesh (23021A0205) delivered a commendable performance across multiple events in athletics. He soared to victory with a Gold in Long Jump, demonstrated his sprinting prowess by securing Silver in the 100m, and capped off his achievement with a Bronze in High Jump.



B. Kavya (22021A0250), Ch. Pragya (22021A0217), G. Lasya Santoshi (23021A0211), S. Ruchita (23021A0246) and K. Kavya (24025A0256) secured the Runner-Up position in Women's Ball Badminton during Sports Day 2025.



The EEE boys team delivered a stellar performance in the Kho-Kho (Men) game, securing the Runners-Up title with determination and teamwork. A special mention goes to Captain **K. Ashok Sai** for his exceptional leadership and **G. Gnanendra** and **S. Tarun** for their inspiring performance.

EEE Kho Kho (Men) Team:

K. Ashok Sai (C), G. Gnanendra, Ch. Venkatesh, P. Rohit Sai Teja, M. Jaisurya, K sriram, V. Jaya Sree Naga Kiran, R. Nikhil, N. Rohith, G. Manikanta, K. Lateesh, S. Tarun

The EEE boys Cricket team delivered an outstanding performance, battling their way to the semifinals with passion and perseverance. The tournament featured consistent batting from **Sk. Ashif** and powerful strokes by **Ch. Venkatesh**, keeping the scoreboard ticking. **K. Ashok** and Captain **T.S. Govinda Krishna** showcased all-round brilliance, making key contributions with both bat and ball. Govind's sharp captaincy was further elevated by his excellent fielding display, including game-changing catches that turned the tide in crucial moments. The team stood tall against tough competition—kudos to all for a remarkable run!



EEE Cricket (Men) Team:

T. Sai Govinda Krishna(C), K. Ashok Sai, Sk. Ashif, B. Ramana, Ch. Venkatesh, J. Mukesh babu, M. Akash, S. Santosh, K. Vijay, N. Rohith, Ch. Mohan, J. Sudheer, K. Latheesh, D. Vara Prasad

The table tennis team of **Ch. Pragya** (22021A0217), **S. Ruchita** (23021A0246), **K. Kavya** (24025A0256), **G. Lasya Santoshi** (23021A0211), and **J. Jyothsna** (23021A0218) performed well and finished as runners-up. The team showed good coordination and effort throughout the matches.



The EEE Boys and Girls showed great grit and determination throughout Sports Day 2025, making one of the best comebacks of the year. Their teamwork, resilience, and fighting spirit were evident in every event they participated in. This year's efforts have laid a strong foundation, and there's no doubt the students of EEE are set to reach even greater heights in the coming year's Sports day.

EVS AND THEIR EVOLUTION

Introduction:

Electric vehicles (EVs) have transformed from simple battery-powered carriages in the 19th century to cutting-edge, sustainable mobility solutions in the 21st century. Their journey reflects the world's shifting focus toward cleaner energy and smarter transportation.

Early History (1800s–Early 1900s)

The origins of EVs date back to the 1830s when inventors in Hungary, the Netherlands, and the United States developed small-scale electric carriages. By the early 1900s, electric cars were quite popular, especially in cities, thanks to their quiet operation and ease of use compared to gasoline cars.

However, as petroleum became more available and the internal combustion engine improved, especially with Ford's mass-produced Model T (1908), EVs began to fade from the market.

Decline and Dormancy (1920s–1980s)

For much of the 20th century, EVs remained in the background. Gasoline vehicles dominated due to cheap fuel, longer ranges, and better infrastructure. While there were occasional attempts to revive EVs during oil crises, the technology was still limited—especially in battery performance and charging capabilities.

Revival Begins (1990s–Early 2000s)

Environmental concerns and fuel efficiency demands led to renewed interest in EVs. The GM EV1, launched in 1996, was one of the first serious modern attempts at a fully electric car, though it was ultimately discontinued. Around the same time, the Toyota Prius (1997) popularized hybrid technology globally.

These vehicles showed that alternative energy cars had a place in the market—but limitations still held them back.

A Turning Point: Tesla and Modern EVs (2008–Present)

Tesla Motors revolutionized the EV space with the launch of the Tesla Roadster in 2008. It was the first EV to offer over 200 miles of range and strong performance, challenging the stereotype that EVs were slow or boring.

Following this, Tesla released the Model S, Model 3, and other models, forcing the global auto industry to take EVs seriously. Other automakers like Nissan, Chevrolet, and BMW followed suit with models like the Leaf, Bolt and i3.

The EV Boom and Future Outlook

Today, EVs are more affordable, practical, and high-tech than ever. Lithium-ion batteries have drastically improved, with ranges of 300+ miles becoming common. Charging infrastructure is expanding rapidly, including fast chargers and home solutions.

Governments worldwide are supporting EV adoption through subsidies, tax incentives, and even bans on new internal combustion engine sales by 2035 or earlier.

Conclusion

From horse-drawn electric carriages to sleek, AI-integrated Teslas, the evolution of EVs is a story of innovation, adaptation, and a growing commitment to sustainability. As technology continues to improve and global awareness rises, EVs are not just the future—they are the present.

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SMART HOMES: THE EVOLVING ROLE OF AUTOMATION IN MODERN LIVING

In recent years, the concept of the "smart home" has rapidly transitioned from novelty to necessity in many households. Driven by advancements in wireless communication, data analytics, and the Internet of Things (IoT), smart home technologies are fundamentally changing the way individuals interact with their living spaces. At its core, a smart home integrates intelligent systems that automate and control various home functions—such as lighting, heating, security, and entertainment—through centralized platforms accessible by mobile devices, voice commands, or predefined automation rules.

The essence of a smart home lies in its ability to connect traditionally independent devices into a unified, responsive ecosystem. Common examples include programmable thermostats that optimize energy use based on occupancy patterns, motion-activated lighting that enhances convenience and security, and smart plugs that allow remote control of appliances. These devices typically communicate via Wi-Fi, Zigbee, or Bluetooth protocols, and are often managed through centralized hubs or cloud-based applications that aggregate user preferences and enable seamless control.

One of the most significant benefits of home automation is its potential to improve energy efficiency. Smart thermostats, for instance, can reduce energy consumption by learning user behavior and adjusting settings accordingly. Similarly, automated lighting systems can switch off lights in unoccupied rooms, minimizing unnecessary power usage. This optimization not only contributes to reduced energy bills but also supports broader environmental sustainability efforts—an increasingly important consideration in the context of climate change and energy conservation.

In addition to energy savings, smart homes offer enhanced security and convenience. Internet-connected cameras, door locks, and alarm systems enable real-time monitoring and control, often accompanied by instant notifications to a user's mobile device. Voice-controlled assistants such as Amazon Alexa, Google Assistant, and Apple Siri further simplify interaction with smart home ecosystems, particularly for individuals with mobility challenges or disabilities. The combination of automation and remote accessibility ensures a level of convenience and responsiveness that was previously unattainable in conventional home setups.

Despite these advantages, there are important challenges and considerations that must be addressed. Data privacy and cybersecurity remain critical concerns, as connected devices are inherently vulnerable to unauthorized access if not properly secured. Interoperability among devices from different manufacturers can also pose integration issues, emphasizing the need for standardized communication protocols and cross-platform compatibility. Additionally, reliance on cloud services and constant internet connectivity means that outages—whether power- or network-related—can disrupt functionality.

Looking ahead, the smart home landscape is expected to become even more sophisticated with the integration of artificial intelligence and predictive analytics. These advancements will enable systems to not only respond to commands but also anticipate user needs based on patterns and environmental inputs. As adoption continues to grow, electrical engineers, designers, and developers will play a vital role in ensuring that smart home infrastructure remains secure, efficient, and scalable.

In conclusion, smart home automation represents a significant evolution in how technology integrates into daily life. While its benefits in terms of energy efficiency, security, and convenience are clear, thoughtful design and robust security frameworks are essential to ensuring long-term success and user trust. As the smart home continues to mature, it is poised to become an integral component of the connected, sustainable lifestyles of the future.



source: <https://ajeevi.com/industries/smart-home/>

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