



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY  
GURAJADA VIZIANAGARAM  
COLLEGE OF ENGINEERING VIZIANAGARAM(A)



"NOTHING IS TOO  
WONDERFUL TO BE  
TRUE, IF IT BE  
CONSISTENT WITH  
THE LAWS OF  
NATURE."

-MICHEAL FARADAY  
(1791-1867)

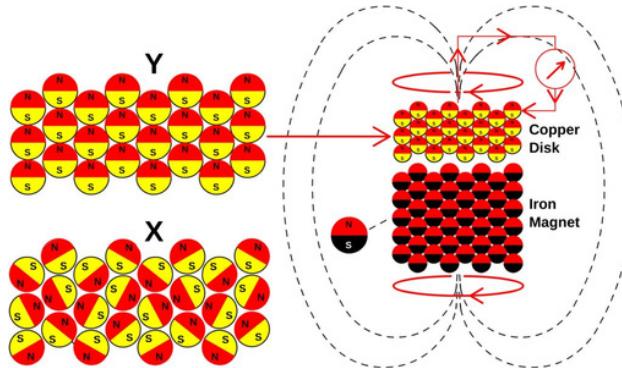
# THE MEMOIR

- CHRONICLES OF EEE

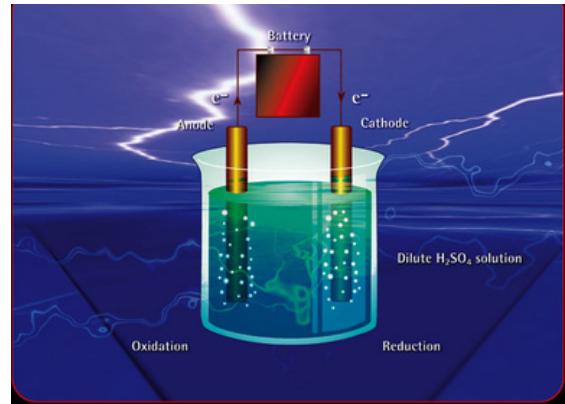
VOLUME-XI

SEPT-23

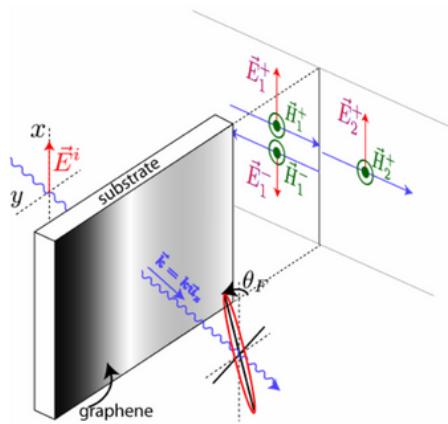
# INVENTIONS OF MICHEAL FARADAY



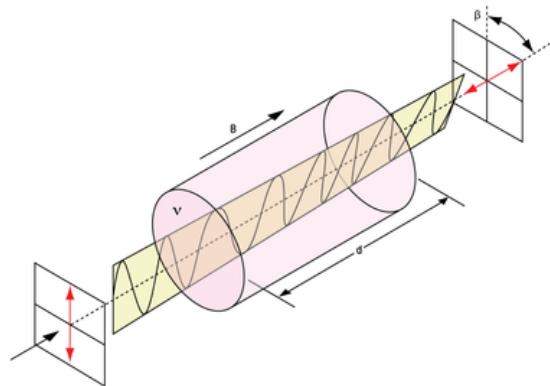
*Faraday's Paradox*



*Faraday's Electrolysis*



*Faraday's Wave*



*Faraday's Rotator*

$$E.C.E = \frac{E}{96500}$$

Where,

- E.C.E=Electrochemical Equivalence
- E=Chemical Equivalence
- 96500C is faraday Constant or One Faraday

*Faraday's Constant*

## EDITORIAL COLUMN

Dear Readers,

We, the department of Electrical and Electronics Engineering of JNTU-GV, are proud to present you the 11th edition of our magazine "**THE MEMOIR- CHRONICLES OF EEE**" as a tribute to MICHAEL FARADAY.

We would like to show our gratitude to the principal, **Prof. K. Srikumar**, for his abundant support and making sure that the students are provided with authentic learning experience, Head of the department, **Dr. A. Padmaja**, who has continuously been guiding everyone around and making the surrounding stipulating and fruitful, Assistant Professor of EEE and Controller of Examinations JNTU GV, **Dr. V. S. Vakula** for encouraging us in every way she can, all the faculty, department of Electrical and Electronics Engineering and fellow students for their continuous support in every way they can to bring shape this magazine into a scintillating one.

A college Magazine aims at inculcating creativity in the students and serves as a platform to showcase their amazing artistic skills. This, we have kept in mind and have tried to include maximum number of creative entries by the students and this resulted in an edition consisting information about a scientist, Need of storage devices in microgrid, Augmented Reality (AR), Smart Farming, Wireless Power Theft Monitoring, Semiconductor Chips, Electric Vehicles and General topics like current affairs and inspiring minds were also included.

We would like to express our considerable appreciation to all the authors of articles for showing their enthusiasm and creativity, which is praiseworthy and will be visible to you as you flip through the pages. Enjoy the experience and do not forget to give us your feedback. We would always cherish your valuable comments and suggestions. Have a happy read!

**THANK YOU  
TEAM MAGAZINE**

## **PRINCIPAL'S MESSAGE:**



As the principal of JNTU-GV, my primary focus is to make the students stand in a position to write GATE and other competitive exams and get qualified. It serves as a benchmark for their knowledge in technical field.

However, the students should inculcate the habit of learning various other related programs which are knowledge based, reasoning based and aptitude based. The students should also have an habit of participating in various activities like technical and non technical to become and all rounder in the society. I would like to see more people engaged in research orientation.

I congratulate the editorial board on its tireless efforts in bringing out this publication of magazine "THE MEMOIR" of Electrical and Electronics Engineering department. I also extend my most sincere gratitude to the ones who have contributed to this issue and enhanced its perfection through their articles.

**By**

**Dr.K.SRIKUMAR**

**Professor of EEE**

**Principal, JNTU-GV**

## HOD'S MESSAGE:



Today we live in a world where change is riding an accelerated pace and we need to pause and reflect on the entire education system.

I am excited to hear that the students at the Department of Electrical and Electronics Engineering, College of Engineering (A), JNTUGV, have published the MEMOIR - XI edition issue of their bimonthly newsletter, "THE MEMOIR". I wish them all the success. I wish for them to be aware of the amazing and inspirational people they read about in the news in this way. For all the effort they put into writing the technical and artistic sections of the magazine, I would like to express my gratitude.

I believe it is fantastic that the editors have continued to work towards making the magazine a reality.

By  
**Dr. A. PADMAJA**  
**Asst. Professor &**  
**Head of Dept EEE**  
**JNTUGV-Project Engineer(elec.)**

# CONTENTS

S.N.O.	NAME OF THE ARTICLE	PAGE
1.	MOTTO OF THE MAGAZINE	7
2.	ABOUT THE SCIENTIST	8
3.	NEED OF STORAGE DEVICES IN MICROGRID	11
4.	AUGMENTED REALITY(AR)	14
5.	SMART FARMING	17
6.	WIRELESS POWER THEFT MONITORING	20
7.	SEMICONDUCTOR CHIPS	22
8.	ELECTRIC VEHICLES	24
9.	CURRENT AFFAIRS	27
10.	CREATIVE MINDS	30
11.	STUDENT ACTIVITIES	32
12.	STUDENT ACHIEVEMENTS	36
13.	SPORTS ACHIEVEMENTS	38
14.	GATE RANKS	39
15.	PROJECTS	40

Designed and Edited by:  
**Matcha Sohan - 21VV1A0236**  
**Ellapu Poorna - 22VV5A0269**  
**III BTech EEE**

## MOTTO OF THE MAGAZINE

The issue that's now in your hands aims for the advancements in technology for the utilization of energy to a better extent. Energy has been playing an important role for long and will be one of the crucial resources in the future. Its use in sectors like industries, commerce, transport, telecommunications, wide range of agricultural and household services has compelled us to focus our attention to ensure its continuous supply to meet the vigorously growing demands.

So, we need to conserve the energy. More than conservation, we need to adopt sustainable development. As we are having conservation in one hand and the better utilization of energy on the other hand, with the advancement of technology we can opt for the utilization of energy to the maximum extent. We have discussed about the alternatives to the existing conventional sources. Involvement of technology in farming and the advent of game changing devices like, semiconductor chips and Electric Vehicles(EVs).

Covid-19 has paused our lives for a long period and it is time we need to step into shoes and get back to normal. And mind you, taking precautionary measures is a must. Through the extreme corners of this editorial, we bring you few of the finest articles written by minds filled with zeal and enthusiasm. We made our earnest efforts to give a massive kick start to our regular mode of learning and this one is a testament of it.

## ABOUT A SCIENTIST



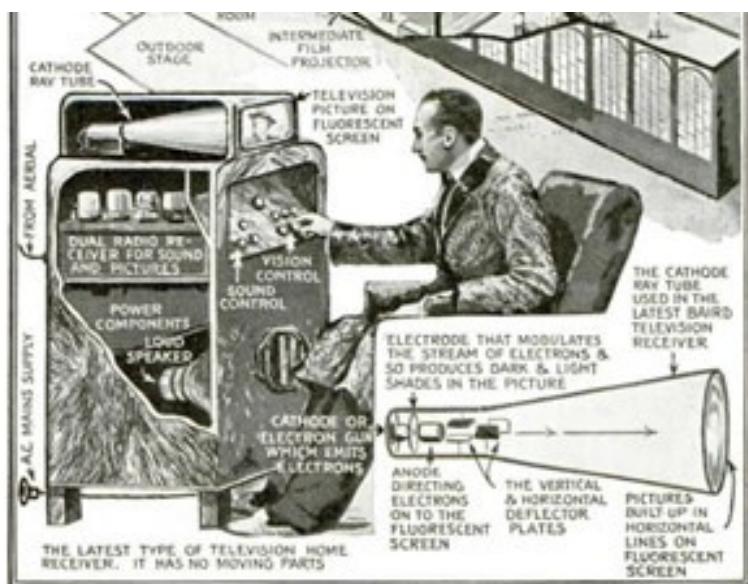
### JOHN LOGIE BAIRD

John Logie Baird (1888 – 1946) was a Scottish engineer and inventor, who demonstrated the first televised moving objects, the first transatlantic TV broadcast and the first colour TV in 1941. Baird was born in Helensburgh, Argyll and Bute, Scotland, in 1888. He studied at the **University of Glasgow** before the First World War intervened. Baird began his research into the problems of televising moving objects at the age of 18 and continued to work on experiments in his spare time.

In 1923, he moved to Hastings in England and rented a workshop where he continued to refine his experimental designs for moving TV pictures. He was benefitted from the work of Arthur Korn in developing image transmission from signal conditioning. Baird's breakthrough was to develop a **stronger photoelectric cell** and **improving the signal conditioning for images**.

By 1926 he was able to successfully show televised objects in outline, using a flying spot of light to scan a cathode ray tube. He demonstrated his TV to the Royal Institution on 26 January 1926. By 1928 he was able to show the first transatlantic television broadcast. Baird also produced the **first colour television pictures** in **1941**. After the second world, television became an essential part of nearly all households. It has become the most popular form of entertainment leading to the decline of many alternative forms of entertainment such as the music hall and radio.

## EARLY DIAGRAM OF BAIRD'S TV:



SOURCE: "POPULAR MECHANICS" (1933)

He tried his hand at other inventions, which proved less successful. In his twenties, he tried to create diamonds made out of graphite, but this failed and also, he managed to short-circuit Glasgow electricity network.

He created a glass razor which broke and pneumatic shoes which burst. Suffering from cold feet, he invented a self-heating sock, though he later found putting a layer of cotton inside the sock was more effective.

More successfully, he tried to create the **world's first video recording device**. His phonograph could record a 30-line video signal onto a 78 black disc. Although it never caught on, it showed his inventive capacity. Baird was dogged with ill health throughout his life. Baird died on 14 June 1946 in Bexhill-on-Sea in Sussex. He ranked **44 on the list of 100 greatest Britons** and **one of the ten greatest Scottish scientists**.

## SOURCE:

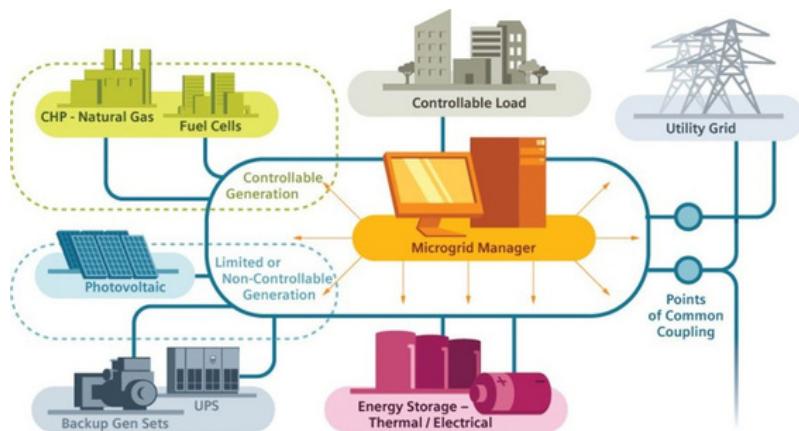
<https://www.biographyonline.net/>

MATCHA SOHAN

21VV1A0236

III B.TECH EEE

## NEED OF STORAGE DEVICES IN MICROGRID



Microgrids are small-scale energy grids, where renewable energy generation and energy storage technologies are integrated to provide adequate energy supply to meet the local demand. Generally, it consists of Loads, Distributed Generation, Energy Storage Devices and Control.

Storage devices are also added or integrated with RERs mainly to maintain the reliability of the supply. Due to unavailability of constant solar irradiance or wind etc. are not able to generate constant power throughout the day. The Temperature, latitude and longitude of the place effect the power generation. This may create unbalance power flow among the load and generation which in terms reduces the stability and reliability of the microgrid operation. Hence, storage devices are the one of the solutions to improve the operations.

The role of Energy Storage devices is to meet the load demand during power failures, charging during peak off periods and supplies power to the demand during peak periods.

Efficiency, Lifespan, Charging/discharging, Flexibility, Dynamic performance all these parameters depend up on the topologies of Hybrid Energy Storage System interconnection.

In general, a storage system requires both high energy and power density whereas a single storage system device can't provide both high energy & power densities. In microgrid application, there must be a HESS so that it can handle both steady and transient operation of the system. As the sudden changes within the system causes the battery to fast charge & discharge which in turn reduces the battery life. A supercapacitor can handle sudden surges. Therefore, Battery and Super Capacitor are used in microgrid applications.

### **PASSIVE CONNECTION:**

Storage devices are directly connected to the dc bus without any power converters.

### **Limitations:**

- 1.Terminal voltage matching of HESS with dc bus or with connected load is primary concern.
2. More chances of cascaded failure during any fault in the system.
3. Sharing of power depends on internal impedance.

### **SEMI ACTIVE CONNECTION:**

One ESS is connected to directly dc bus and other ESS is connected to the dc bus through a dc/dc bidirectional converter.

It is better compared to passive connections.

### **Limitations:**

1. When SC is connected directly connected to the dc bus and bus voltage fluctuates in any contingencies of the system
2. If SC is connected to dc bus through dc/dc converter, the converter should be designed properly to tackle the power surges of the system.

### **ACTIVE CONNECTION**

Both battery and supercapacitor are connected to dc bus through separate dc/dc bidirectional converters.

Parallel active connection is implemented in power system due to:

1. Flexibility is improved
2. Both centralized and decentralized can be implemented.

Terminal voltage of the battery and SC are independent of dc bus voltage.

### **SOURCE:**

Sustainable Technologies  
Energy Management of Hybrid  
Microgrid course- NIT Rourkela

E. POORNA  
22VV5A0269  
III B.TECH EEE

## AUGMENTED REALITY (AR)



### What is Augmented Reality (AR)?

Augmented reality is an interactive experience that combines the real world and computer-generated content. The content can span multiple sensory modalities, including visual, auditory, haptic, somatosensory and olfactory. Using software, apps, and hardware such as AR glasses, it overlays digital content onto real-life environments and objects. AR can be defined as a system that incorporates three basic features: A combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects. The overlaid sensory information additive to the natural environment or masking of the natural environment. Augmented reality alters one's ongoing perception of a real-world environment, whereas virtual reality completely replaces the user's real-world environment with a simulated one.

### How AR works?

1. An AR-enabled device with a camera such as smart glasses, a tablet, or a smartphone parses a video feed to identify a physical object or the environment around the user, such as a piece of machinery or the layout of a warehouse.

2. A digital twin -a 3D digital replica of the object in the cloud - connects the real and virtual environments. It collects information from the physical object and digital.
3. The augmented reality device then downloads information about the object from the cloud. It superimposes digital information over the object using markers or trackers like GPS, accelerometers, orientation and barometric sensors, and more. This creates a part-real, part-digital 3D interface.

### **Types of AR:**

1. **Marker-based AR:** A marker, which is a special visual object like a special sign or anything, and a camera are used to initiate the 3D digital animations. The system will calculate the orientation and position of the market to position the content effectively.
2. **Marker-less AR:** It is used in events, business, and navigation apps. It may use GPS, compasses, gyroscopes, and accelerometers as can be used on mobile phones. Marker-less AR does not need any physical markers to place objects in a real-world space.
3. **Project-based AR:** This kind uses synthetic light projected on the physical surfaces to detect the interaction of the user with the surfaces. It is used on holograms like in Star Wars and other sci-fi movies.
4. **Superimposition-based AR:** In this case, the original item is replaced with an augmentation, fully or partially.

**Examples of AR technology:** Snapchat and Instagram filters and Pokémon go-The game

## **Major applications:**

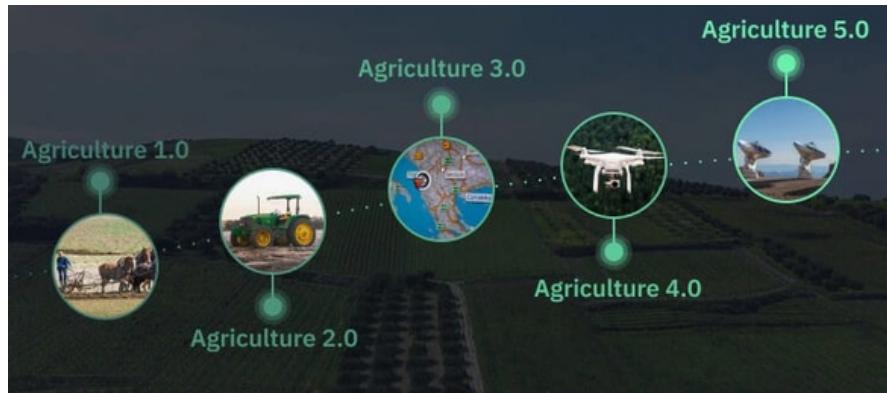
1. **Healthcare:** Surgeons use AR to provide real-time guidance to surgeons during complex procedures and creating virtual models of patients' organs.
2. **Architecture:** AR can aid in visualizing building projects. Computer-generated images of a structure can be superimposed onto a real-life local view of a property before the physical building is constructed there.
3. **Industries:** The instructions are overlaid on the working area. The use of AR can increase operators' feeling of safety when working near high-load industrial machinery by giving operators additional information on a machine's status and safety functions, as well as hazardous areas of the workspace.
4. **Search and rescue:** Drones equipped with cameras can stream live feeds to AR devices. Rescuers can view a larger area from the drone's perspective, allowing them to cover more ground and spot victims or obstacles from an aerial viewpoint.
5. **Entertainment and gaming:** AR is being used in a variety of ways in the entertainment industry, including enhancing live events, creating more immersive and interactive viewing experiences for movies and TV shows, and creating more realistic and immersive video game experiences.

## **SOURCES:**

<https://www.sap.com/india/products/scm/industry-4-0/what-is-augmented-reality.html>

CH. YASHWANTH  
KOUSHIK REDDY  
22VV5A0268  
III B.TECH EEE

# SMART FARMING



Agriculture, is unquestionably the largest livelihood provider in India, especially in the vast rural areas. It also contributes a significant figure to the Indian Gross Domestic Product (GDP). Sustainable agriculture, in terms of food security, rural employment, and environmentally sustainable technologies such as soil conservation, sustainable natural resource management and biodiversity protection, are essential for rural development.

## **Benefits Of Technology In Agriculture:**

1. Using less water, fertilizer, pesticides, and other inputs allows agricultural producers to cut costs and keep more of their profits.
2. By preventing or drastically reducing the amount of chemical runoff into waterways, businesses lessen agriculture's impact on the environment and take steps toward greater sustainability.
3. Timely recognizing nutrient deficiency in plants and notifying agricultural producers of the type and amount of fertilizer and other amendments needed.

4. Ability to foresee potential problems on the farm through the visualization of production patterns and trends gleaned from an analysis of current and historical agricultural data.
5. Making it easier for farmers, agronomists, or other agricultural workers to communicate and coordinate activities using mobile devices, apps, or web-based resources. Increasing crop yields while decreasing labor inputs.

## **What types of Precision Agricultural Technology are now In use?**

1. **GPS Technology In Agriculture:** GPS data enables the agricultural sector in monitoring and managing field operations, collecting and analyzing data from the fields, accurate soil sampling, yield mapping, navigating and controlling of agricultural machinery, the ability to operate in low-visibility field conditions like heavy rain or fog.
2. **Robotic Technology In Agriculture:** Robotic farm labor technology appears to be a viable choice for precision agricultural needs because it can do monotonous tasks without sacrificing accuracy. The autonomous performance of such robots would allow for continuous field management and improved agricultural productivity.
3. **Data Collection And Storage:** Soil pH, relative humidity, nutrient levels, soil moisture, and past weather data are also an abundance of information about root and surface soil moisture values, vegetation productivity, crop types, field height, weather conditions, temperature readings, agricultural activities and much more is available through Crop Monitoring. This information has practical use in cooperative management, crop planning, and the identification of agricultural risks.

**4. Agricultural Drone Technology:** Drones, also known as unmanned aerial vehicles (UAVs), are becoming more and more common in the agricultural industry. Drones may scan a field from above and report on problems like pests, infections, and a lack of essential nutrients. This agricultural data gives farmers command over the state of their fields.

**5. Smart Agriculture Sensors:** Weather conditions, plant moisture, soil temperature and fertility, pest infestations, and weed locations can all be determined with the help of agriculture sensor technology. The information from these sensors enable to evaluate the outcomes and use of this data can assist farmers for productive yield.

**6. Mobile Technology In Agriculture:** Agriculture-related mobile applications are currently expanding their market share and feature sets. You can track the weather in the field, plan and manage scouting tasks, and get updates on your current situation all from the convenience of your mobile device.

## **SOURCE:**

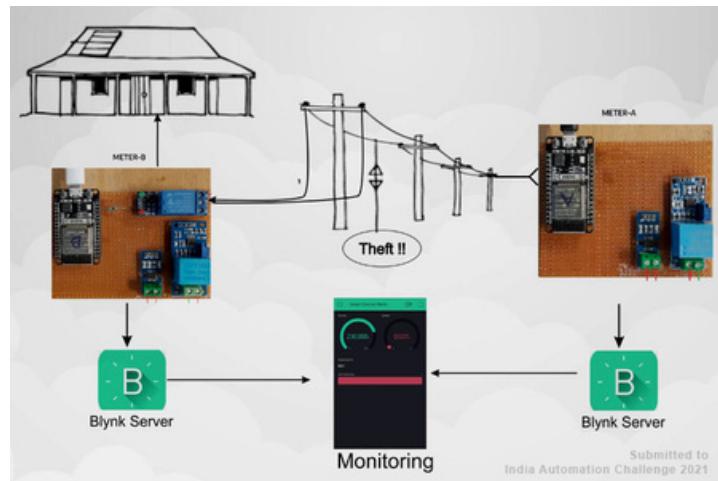
<https://www.india.gov.in/topics/agriculture>

S. HARSHA VARDHAN

22VV5A0273

III B.TECH EEE

## WIRELESS POWER THEFT MONITORING



The main aim of power theft monitoring and indication system at local substation using wireless technology indicates the location where the power is being stolen. The main purpose of power theft monitoring is saving the power that is being gone worthless.

Power theft is one of the biggest problems which causes huge power loss to electricity boards and to compensate this, the cost per unit is increased. If we keep an eye check on these power thefts, we save lot of power by tracking the electricity used. This will ultimately reduce household power bills.

### Theft of Power:

These are the losses caused intentionally by humans by illegal access to the power distribution networks.

Electricity theft is termed as non technical loss. This electricity theft is estimated to result in huge amount of revenue loss per year in India. All the utilities make effort to reduce the losses. Due to technology development, the technical losses can be reduced substantially. However to reduce commercial losses, strategic approach is essential.

## **The way of Power Theft:**

1. **Power Taping:** Often power theft is done during transmission by illegal tapping of the power lines to divert the power to the required destinations. It is also done by illegal connections to the power grid stations which are cut at the time of billing.

2. **Meter Fraud:** IN many areas where the manual meter reading is done, the person is always bribed to give false readings and thus the amount paid is for lesser amount of power compared to the power actually consumed.

## **Methods to reduce Power Theft:**

**Energy meter tampering:** The meter can be detected by using a simple arrangement of IR LED and a Photodiode. It is used in places where conventional Electromechanical energy meters are used.

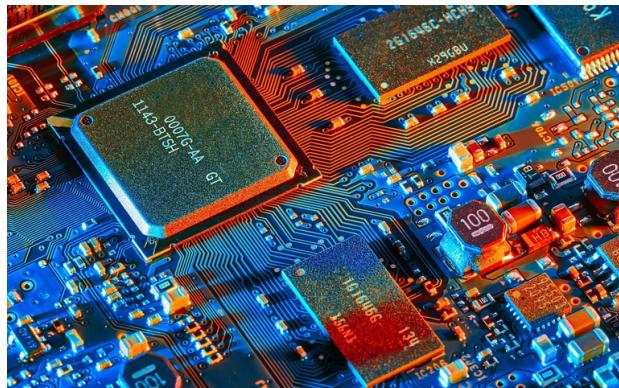
Power tampering can be detected by comparing the power distributed to the line and the power actually consumed by the load. This can be done by installing an Electronic energy meter at the load side and the meter readings are sent wirelessly to the distribution unit. This reading is received by a wireless receiver and is compared with the actual power given to the load. The difference in readings gives the error and the error signal is given to the controller which in turn controls the secondary voltage of the transformer, thus causing the transformer to stop the power. Thus power theft is detected by tapping and halted.

## **SOURCES:**

<https://www.allaboutcircuits.com>  
<https://www.elprocus.com>  
<https://www.academia.edu>

M. VASANTHA  
22VV1A0234  
II B.TECH EEE

# SEMICONDUCTOR CHIPS



Semiconductor chips are brain of the electronic device. In world everyday 100 billions of SC chips are needed. now a days technology increase rapidly demanding more every gadget need semiconductor chips. SC are used in manufacturing of phones, television, cars etc. Most semiconductor chip manufacture companies in Taiwan, China, Hong Kong, Japan, USA etc. Silicon represents almost 25% of material used in manufacturing of smartphones. Mainly in cars used to control everything from emissions system to driver assist system.

## **Why Semiconductor chips are important?**

Semiconductor crisis is the most critical economic threat in world. Apple company loss \$6billion loss due to shortage of SC chips. Maruti company 1.16lakhs vehicles are not produce because of shortage of SC chips .

## **Why are SC chips going scarce?**

Manufacturing of SC is difficult process and three months time taken for end product. COVID pandemic has had a huge impact on manufacturing of SC chips. Due to the advancement of technology, the SC chips are going out of stock as they take more time to manufacture.

## **Semiconductor chips hub:**

At present, Taiwan produces 60% chips across the world.

## **How is India going to dominate the semiconductor chip market?**

India has moved forward to eliminate depending on China and Taiwan. It has encouraged investors in manufacturing SC companies in the country itself. Due to rapid increment of demand for semiconductor chips, India is seen as a global semiconductor manufacturing unit in the nearby time. Also, it has invited companies like Foxconn and Micron to set up 20 manufacturing centers in India in the next two years.

The future of semiconductors continues to evolve, and current trends foreshadow even higher levels of innovation and competition. Prior to 2023, increased demand, geopolitical conflicts, closed factories, and inflation had led to semiconductor shortage and a dip in production.

Manufacturers are increasing chip production - but the shortfall won't be resolved immediately. Despite the current problems, the industry remains highly profitable. When chip shortages first shut down automotive production lines in 2021, the semiconductor industry found itself in an unaccustomed spotlight.

## **SOURCE:**

<https://www.howtogeek.com/737644/what-is-a-semiconductor/>

K. DIVYA APARNA

22VV1A0229

II B.TECH EEE

# ELECTRIC VEHICLES



An Electric Vehicle is a vehicle that uses one or more electric motors for propulsion. It can be powered by an collector system, with electricity from extra vehicle sources or it can be powered autonomously by a battery. EVs are not only limited to road and rail vehicles, and broadly can also include electric boat and underwater vessels, electric aircraft and electric spacecraft.

Electric Vehicles (EVs) have emerged as a transformative source in the automotive industry, promising a sustainable future for transformation. These are powered by electricity, either from grid connected sources or on board batteries.

## **Benefits of Electric Vehicles:**

1. First and foremost, EVs offer a substantial reduction of greenhouse gases' emission. They produce zero tailpipe emissions. This is a significant step towards combating climate change and improving air quality in urban areas.
2. On the other hand, EVs provide higher energy efficiency. Electric motors are more efficient than IC engines, converting higher percentage of energy from grid into vehicle movement.

3. Furthermore, EVs contribute to energy diversity and security. They also offer quieter and smoother ride, as electric motors produce less noise and vibration compared to traditional engines. Additionally, they have fewer moving parts, leading to reduced maintenance requirements and longer lifespans.

But on the other side, there are some challenges such as the need for wide spread charging infrastructure and addressing the environmental impact of battery production and disposal. Nevertheless, with ongoing advancements in technology and growing environmental awareness, EVs are poised to play a central role in the transition to a more sustainable and eco friendly transportation system.

EVs often benefit from government incentives such as tax credits and rebates, which make them even more appealing to buyers. There are some challenges to EV adoption. Range anxiety or the fear of running out of battery power remains a concern for consumers. While battery technology continues to improve, expanding charging infrastructure is crucial to address the charging stations. It's essential for governments, industry players and consumers to continue supporting and investing in EVs technology to accelerate the transition.

Government incentives to increase adoption were first introduced in the late 2000s, including in the US and the EU, leading to the growing market for vehicles in the 2010s. Increasing public interest, awareness and structural incentives such as those being built into the green recovery from the pandemic, are expected to greatly increase the EV market.

International Energy Agency has stated that governments should do more to meet climate goals , including policies for heavy electric vehicles. A total to 14% of all new cars sold

were electric in 2022, up from 9% in 2021 and less than 5% in 2020. As of July 2022, the global EV market size was \$280 trillion by 2026. Much of this growth is expected in markets like North America, Europe and China. At more than 20%, two/three wheelers are the most electrified road transport segment today, and are projected to continue being the largest EV fleet among all transport modes.

In conclusion, EVs represent a promising solution to reduce emissions, enhance energy efficiency and transform the way we think about transportation. As we continue to develop the necessary infrastructure and improve battery technology, EVs are likely to become even more accessible and beneficial for individuals and the environment.

## **SOURCE:**

[https://www.techradar.com  
m/news/evs-explained](https://www.techradar.com/news/evs-explained)

P. LAVANYA  
22VV1A0246  
II B.TECH EEE

## CURRENT AFFAIRS

1. The Indian government signed an agreement to set up an IIT campus in which country?  
A. Ethiopia  
B. Senegal  
C. Tanzania  
D. South Africa
  
2. 'Vishwakarma Scheme' is an initiative that's going to benefit whom?  
A. Industrial Workers  
B. Craftsmen and Artisans  
C. Farmers  
D. Doctors
  
3. Who's been appointed as Charge d'Affaires in Pakistan?  
A. Geetika Srivastava  
B. Suresh Kumar  
C. Shivshankar Menon  
D. Nidhi Choudhary
  
4. Which Indian state became the first one to deploy females in toll plazas?  
A. Chhattisgarh  
B. Haryana  
C. Jharkhand  
D. Madhya Pradesh
  
5. The location where Chandrayaan-2's lander is named as?  
A. Tiranga point  
B. Shivshakti point  
C. Maitreyi point  
D. Bharat point
  
6. India's first 3D printed post office was setup in which city?  
A. Mumbai  
B. Bengaluru  
C. Kochi  
D. Lucknow

7. The African Union has got its membership in G20. How many countries does it have?
- A. 50
  - B. 52
  - C. 55
  - D. 58
8. Which hurricane hit the US in August 2023?
- A. Hurricane Maria
  - B. Hurricane Charley
  - C. Hurricane Irma
  - D. Hurricane Hillary
9. Calyampudi Radhakrishna Rao, who died in August, was an expert in?
- A. Mathematics
  - B. Physics
  - C. Economics
  - D. Chemistry
10. Who is honored as the “National Icon” by the Election Commission of India?
- A. Amitabh Bachchan
  - B. Sachin Tendulkar
  - C. AR Rahman
  - D. Vishwanath Anand
11. Jayanta Mahapatra, a renowned author, is from which state?
- A. West Bengal
  - B. Bihar
  - C. Jharkhand
  - D. Odisha
12. Which country was the first to impose ban on ChatGPT?
- A. China
  - B. Russia
  - C. Iran
  - D. Italy
13. The 7th edition of Japan India Maritime Exercise (JIMEX) 2023 was held in?
- A. Visakhapatnam
  - B. Goa
  - C. Kochi
  - D. Chennai

14. Which Indian became the first cricketer to dismiss both father and son?
- A. Ravindra Jadeja
  - B. Jasprit Bumrah
  - C. Ravichandran Ashwin
  - D. Umesh Yadav
15. Tharman Shanmugaratnam won the presidential elections of which country?
- A. Thailand
  - B. Singapore
  - C. Indonesia
  - D. Malaysia

**Answers:**

- |              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|
| <b>1. C</b>  | <b>2. B</b>  | <b>3. A</b>  | <b>4. D</b>  | <b>5. A</b>  |
| <b>6. B</b>  | <b>7. C</b>  | <b>8. D</b>  | <b>9. A</b>  | <b>10. B</b> |
| <b>11. D</b> | <b>12. D</b> | <b>13. A</b> | <b>14. C</b> | <b>15. B</b> |

**SOURCE:**

<http://epaper.deccanchronicle.com/states.aspx>

MATCHA SOHAN  
21VV1A0236  
III B.TECH EEE

## **C R E A T I V E   M I N D S**

### **Tips to crack GATE in the first attempt:**

1. The first step in GATE preparation is understanding the GATE syllabus and pattern.
2. Generally, two or three books are enough for a particular subject where one book can be used in the start and other books can be referred if any doubts arise.
3. It is necessary to have a study plan for GATE preparation as it inculcates discipline and time management skills.
4. It is very important to focus on Aptitude and Mathematics as they are quite scoring subjects and constitute around 30 marks in the GATE exam.
5. Preparing notes with the important information and formulae is vital as these notes can be referred later during revision.
6. Analyzing and attempting previous GATE papers and GATE mock tests is an excellent way of understanding the GATE structure in a controlled environment.
7. After understanding a topic thoroughly, it is important to revise it at suitable intervals otherwise there is a chance of forgetting it.
8. The virtual calculator can be a little complicated and so it is important to familiarize yourself with it before the GATE exam.

### **SOURCE:**

<https://www.geeksforgeeks.org/tips-to-prepare-for-gate/>

M. B. S. RADHA  
K R I S H N A  
2 1 V V 1 A 0 2 3 4  
III B.TECH EEE

## **Career options after Bachelor of Technology in Electrical and Electronics Engineering:**

Electrical Engineering is such a versatile career that you can work in the world after acquiring a BTech degree. Since the guiding principles of electrical applications, mathematics and physics are constant, your degree will be accepted by most top global companies.

1. Being a Power Engineer is one of the best careers after electrical engineering as there are several scopes in this job profile. You can work in field of Power generation, distribution, transmission, energy storage, renewable energy, energy management.
2. You can get into government jobs as electrical engineers. There is a great need for these engineers in public sector undertakings. Central government jobs are also available after completion of the B.Tech. The initial salary in the PSU job is INR 24,900 to INR 50,500.
3. Many engineering institutes and journals are always on the lookout for quality technical writers who can write accurate and engaging content based on the subject. Furthermore, you can freelance as an electrician, take up projects of home renovations, or work with interior designers to provide them with home-based electronics solutions.
4. If anyone has got the sufficient to learn more, you may pot to write exams like GATE and GRE to pursue your post graduation in Electrical and Electronics Engineering.

### **SOURCE:**

<https://www.cheggindia.com/career-guidance/career-options-after-electrical-engineering/>

M. KEREN SUNADA

22VV5A0270

III B.TECH EEE

## STUDENT ACTIVITIES

A STUDENT CLUB



### CLIQUE

- A PLACE TO GET INVOLVED

Clique is a student club of EEE department which started in 2022 with an objective to bring the hidden qualities out. The events conducted on weekends demonstrate active participation and competitive spirit. Clique aims to develop qualities of confidence and self learning process in one's mind.

#### Event 1: Plantation Des Arbres

N. Hemanth Kumar and K. Sneha of 3rd BTech EEE JNTU-GV have organized this plantation event on 25th February 2023.

This Event is organized with the Objective for friendly affection towards nature. Everyone enjoyed and felt happy after planting saplings, creating a healthy atmosphere.

Number of participants: 70



## **Event 2: Technical Quiz**

Ch. Yashwanth and D. Vijaya Sree of 3rd BTech EEE JNTU-GV have organized this technical quiz on 18th March 2023.

The aim of this competition is to evaluate the knowledge and to make them familiar with the prospects of the quizzes. It was very informative and knowledge enriching competition for the participants.

Number of participants: 70



## **Event 3: Doodle art**

K. Lakshmi Varshitha and K. Sri Deepthi of 3rd BTech EEE JNTU-GV have organized the doodle art event on 15th April 2023.

This Event is organized with the objective to improve the creative and innovative ideas of students. In this event all the Students of 1st year and 2nd year showed their Creativity and Innovative ideas in Doodling of EEE.

Number of participants: 65



#### **Event 4: ARIVU Non-Tech Quiz**

M. Sohan and K. Durga Sharvani of 3rd BTech EEE JNTU-GV have hosted the Arivu, a Non Tech Quiz on 29th April 2023.

This Event is organized with the objective to inculcate competitive mind set and sportsmanship among vivid branch students. We were successful in making participants and audience involving the competition and raising their spirits by asking interesting questions.

Number of participants: 94



## **Event 5: Project Expo**

E. Poorna and M. Keren Sunada of 3rd BTech EEE JNTU-GV have helmed the Project Expo event on 5th May 2023.

This Event is organized with the objective to encourage the innovative ideas of students. Finally, we were successful in making participants and audience involve in the exhibition and raising their thoughts out of box.

Number of participants: 56



We, the Clique team are overwhelmed to say that we have organized such innovative and successful events, which turned out to be fruitful. We extend our sincere gratitude to our Head of the Department, mentors, faculty and every member of this club for their unparalleled support and encouragement. We look forward to conduct many such events like before.

-Thank You  
Team Clique

## STUDENT ACHIEVEMENTS

### CAMPUS PLACEMENTS "2022-2023"

S.N.O	ROLL NO	NAME OF THE STUDENT	PLACEMENT DETAIL
1.	19VV1A0205	B. CHANDRAMOULI	TCS
2.	19VV1A0220	G.Y.S. HEMANTH NAIDU	TCS
3.	19VV1A0212	B. ASHOK KUMAR	TCS
4.	19VV1A0223	G.A. CHANDRIKA GLORIA	COGNIZANT
5.	19VV1A0221	P.V.V. SRIDEVI GOPI	CYIENT
6.	19VV1A0235	M. JAHNAVI	CYIENT
7.	20VV5A0273	J. HIMASRI	CYIENT
8.	20VV5A0272	NAVYA REDDY	CYIENT
9.	19VV1A0254	S. MADHAVI	CYIENT
10.	20VV5A0269	K. BABY SRINIJA	CYIENT
11.	19VV1A0217	D. ANVESH	CYIENT
12.	19VV1A0210	B. SESHAJALI	COGNIZANT
13.	19VV1A0246	P. RESHAB	L & T
14.	19VV1A0207	B. ISHITHA GAYATHRI	COGNIZANT
15.	20VV5A0268	K. SHYAMALA RAO	MEDHA SERVO
16.	20VV5A0267	S. DAVEEDU	CYIENT
17.	19VV1A0202	A. USHA RANI	COGNIZANT
18.	19VV1A0230	K. V. S. KAVITHA	COGNIZANT
19.	19VV1A0238	N. V. S. CHAKRA DEVI	COGNIZANT
20.	19VV1A0242	P. LAVANYA	COGNIZANT
21.	19VV1A0265	Y. LOKESH	CYIENT
22.	20VV5A0271	S. KALI	COGNIZANT
23.	19VV1A0264	Y. S. D. V. V. ANAND	TCS

**Ms. A. Usha Rani** and **Ms. K. V. S. Kavitha** received Appreciation certificate for best presentation on "Meg-lev" in **National Energy Conservation Week Celebrations-2022**



- **Sixty eight** students have completed their Data Science by using Python Programming course at YBI Foundation and NPTEL.
- N. Ankitha completed her course on Basics of python in Infosys.
- Padamata Surya received appreciation certificate for Blood donation from **Indian Red Cross Society**.
- Y. Yoshitha participated in National interaction Camp-2023(NSS) which was held at **University of Burdwan**, Kolkata, West Bengal.
- P. Harsha Vardhini completed the course on Python for Everybody in **University of Michigan** and **Brain Shine**.
- S.V.S.P.S.S Abhigna completed the course on Google Cloud & T. Mahima completed the course on Python to interact with Operating Systems from Coursera.
- E. Poorna completed the course on Sustainable Technologies & Energy Management of Hybrid Microgrid(STEMM) in **NIT Rourkela**. She is also a part of **Srujanavani NGO**.
- M. Sharvani completed projects on design of electric scooter, electric Auto Rickshaw and Electric Kart from **IIT Bombay**.
- III BTech students have completed **industrial internship** at various places and II BTech students have completed their **Community Service Project (CSP)** at various places.

**Ms.K.Baby Srinija(20VV5A0269)  
Mr.K.Syamala Rao (20VV5A0268)**  
are given Awareness on "Solar Electrical vehicles" in Gayatri School, Gotlam , Vizianagaram



## SPORTS ACHIEVEMENTS 2022-23

NAME	SPORT	ORGANIZED (VENUE)	RESULT	LEVEL OF TOURNAMENT
Sumanth, P. Pavan	Relay running	Aditya College of Engineering, Samarlakota	Winners	UNIVERSITY AND NATIONAL
T. Vijay	Kho-Kho	JNTU, Kakinada	Participated	UNIVERSITY LEVEL
Sumanth, Rajubabu	Volleyball	Volleyball Premier League, JNTU GV	Winners	INTER COLLEGIATE
Satish, Apuroop, Pavan Naik, Ashok, Mnamadharao, Shabeer, Hemanth, Rishab	Kabaddi	Kabaddi Premier League, JNTU GV	Winners	INTER COLLEGIATE
Venkata Mohan, Satish, Pavan Naik, Koushik	Cricket	Sakshi Premier League, JNTU GV	Participated	UNIVERSITY LEVEL

**GATE RANKS 2022-2023**



M. SRINU  
1131(IN)



A. HARSHITH  
1807(IN)



K. SYAMALA RAO  
2304(EC)



B. KRISHNA SAI  
5908(AIR)



Y. LOKESH  
7105(AIR)



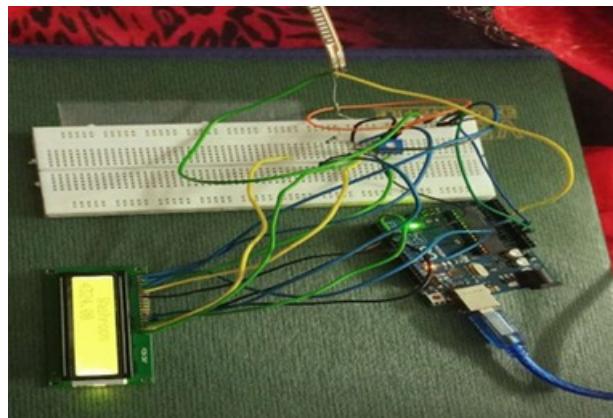
B. RISHITHA  
7587(AIR)



C. CHANAKYA  
8520(AIR)

# PROJECTS

## Project 1: GESTURE VOCALIZER USING RANDOM FOREST ALGORITHM



This system is useful for dumb, deaf and blind people to communicate with one another. This circuit consists of ATmega328 controller for interfacing the communication between deaf and normal people.



19VV1A0254



19VV1A0206



19VV1A0248

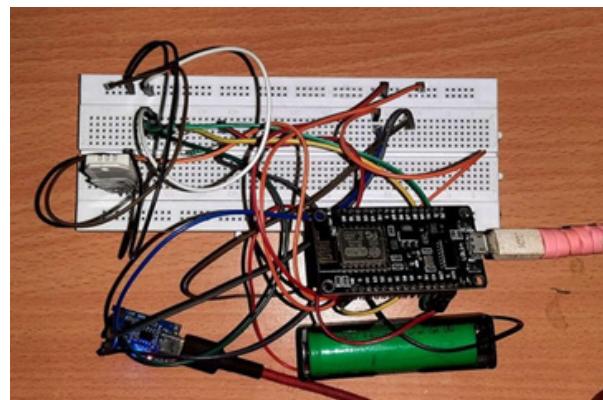


19VV1A0203



19VV1A0257

## **Project 2: IOT BASED BATTERY MANAGEMENT SYSTEM FOR ELECTRIC VEICHLE**



The purpose of this work is to study the SOC of a lithium-ion battery through internet of things (IOT) based battery surveillance system electric vehicles to enable early detection of battery performance degradation.



20VV5A0273



19VV1A0242



19VV1A0262



19VV1A0233

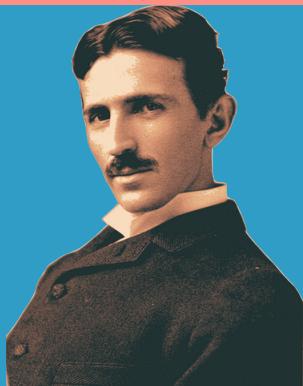


19VV1A0264



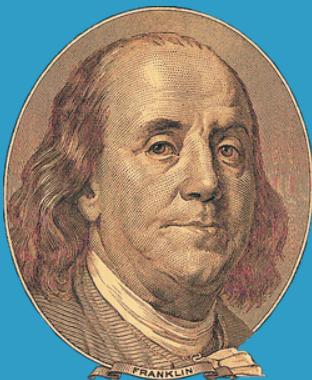
"MANY OF LIFE'S FAILURES ARE PEOPLE WHO DID NOT REALIZE HOW CLOSE THEY WERE TO SUCCESS WHEN THEY GAVE UP."

- THOMAS ALVA EDISON



"IF YOUR HATE COULD BE TURNED INTO ELECTRICITY, IT WOULD LIGHT UP THE WHOLE WORLD."

- NIKOLA TESLA



"WITHOUT CONTINUAL GROWTH AND PROGRESS, SUCH WORDS AS IMPROVEMENT, ACHIEVEMENT AND SUCCESS HAVE NO MEANING,"

- BENJAMIN FRANKLIN



"CONCENTRATE ALL YOUR THOUGHTS UPON THE WORK AT HAND. THE SUN'S RAYS DO NOT BURN UNTIL BROUGHT TO A FOCUS."

- ALEXANDER GRAHAM BELL



VOLUME XI  
SEPTEMBER-2023

