NEW PRINCE SHRI BHAVANI
COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE | Affiliated to Anna University | ISO 9001 : 2015 Certified | Accredited by NAAC

DEPEARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

FAISCA 2K22

Date: 22.04.2022

PREFACE

Welcome to the Faisca 2022 magazine, a vibrant special edition designed to capture the essence and impact of our recent symposium. This magazine is a celebration of the engaging discussions, groundbreaking ideas, and invaluable connections that characterized our event. Join us as we reflect on the highlights and insights that made this gathering truly memorable.

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New Prince Shri Bhavani College of Engineering and Technology
Vengaivasal Main Road, Santhosapuram
Chennai - 600073.

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EDITORIAL DESK

From the editor’s desk:

We are delighted to present FAISCA’22. We hope that the contents of this Souvenir will be rewarding for our readers, showcasing a rich tapestry of scientific, technical, and literary contributions that enhance teaching and research, ultimately benefiting the student community.

Our small initiatives play a significant role in fostering knowledge and enterprise, empowering every individual involved. This Souvenir is a comprehensive collection of technical articles, artistic talents, and diverse life experiences from our students. We aim for each reader to take away a meaningful thought. We have strived to capture the essence of the past year's memories in this Souvenir.

We hope FAISCA’22 truly fascinates each one of you.

Editorial Board

FAISCA’2022

EDITORIAL TEAM MEMBERS

FACULTY COORDINATOR

- **DR.R.VENKATSUBRAMANIAN, M.E., PH.D.**

FACULTY INCHARGE

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- **K.ASOKAN II EEE**

Thiru . K. Loganathan, M.Com., M.Ed. Chairman

MESSAGE

I deem it to be a matter of immense pleasure to articulate my thoughts as the chairman of NPSBCET. Building the career and transforming the lives of the students is our main motto. Our Institution has been in the list of renowned technical institutions in Chennai city, and we have emerged as a preferred choice for aspiring students.

College Education is the foundation for the future possibilities in the life of a student. Hence proper grooming of the students in all aspects is essential to help them meet the challenges of outside world.

Hence at this juncture I wish to congratulate the Department of Electrical and Electronics Engineering for organizing FAISCA'22 which brings out the talents of students and makes them more confident. I express my wishes to students and faculty of the department for grand success of the event.

Chairman

Mr.L. Naveen Kumar, B.E., M.B.A.
VICE CHAIRMAN

MESSAGE

I am pleased to note that Department of Electrical and Electronics Engineering is organizing a National Level Technical Symposium titled FAISCA'22. Education is the most powerful tool to bring desirable changes in our personality and also to bring positive changes in our society. I also believe that, technocrats are the key to develop economic and technological advancement of our country.

Hence the Technical events such as one which is being organized now improves the knowledge and skill of the students. It would improve the importance of team effort among the students. I do wish the organizing committee for their commitment, dedication and hard work in bringing out such an event. I wish the department to achieve the best

Vice Chairman

Prof. A. Swaminathan, M.E., F.I.E.
DIRECTOR

MESSAGE

It gives me great pleasure and happiness to address the Department of Electrical & Electronics Engineering. I congratulate the successive team of FAISCA'22 for their wonderful work in making the event as a top level. Technical and non – technical events enhance the students' capability and improve their knowledge and skill. I am aware that all my staff members and students have wholeheartedly devoted their energy and time form making this endeavor a grand success. I take this as an opportunity to appreciate the input rendered by all of them for organizing the event.

Director

Dr. T. Saravanan, M.E., Ph.D.
PRINCIPAL

MESSAGE

NPSBCET is committed to fostering its students the pursuits of individual excellence and participation in full range of academic, cultural, social and physical activities and make them evolve as all-rounder.

College education is the foundation for all future possibilities in the life of the student. Also, quality education is a passport to its steep rise in life and creates practical avenues to attain financial gains. It provides a golden opportunity to lead a life of dignity and prosperity.

I wish to congratulate the department for their endeavor in bringing out the activities of their department to lime light, FAISCA'22, which allows bidirectional flow of information between students and enriches them to face the challenges while they go out with flying colours from the college.

Principal

Dr.R.VENKATSUBRAMANIAN, M.E., Ph.D.
HEAD OF DEPARTMENT

MESSAGE

As Head of the Department of Electrical and Electronics Engineering, the development of students in all facets of life has to be inculcated in college. Our team of dedicated and highly qualified faculty members work as a team to widen the students' learning process. I am glad with the academic achievements, extracurricular and co-curricular participation of the students As a teacher, I do see myself as having the highest responsibility to lead, motivate and inspire my students apart from imparting knowledge about the subjects. In this regard the department has planned to conduct a National Level Online Technical Symposium FAISCA'22.

I wish to congratulate all the students and staff who have worked tirelessly for the organization of the symposium. Also I would like to wish for the grand success of the event.

HOD / EEE

VISION OF THE INSTITUTE

To strive for excellence in imparting technical education by promoting innovation, creativity and entrepreneurial abilities of the students.

MISSION OF THE INSTITUTE

1. Enhancing the effectiveness of teaching-learning process by providing a stimulating learning environment
2. To establish R&D centers, incubation centers and centers of excellences in latest technologies and provide a platform for students to interact with the industry.
3. Achieving Academic excellence by imparting knowledge and skills through problem solving, practical training and design &; development of innovative projects.
4. Sensitizing students to social and environmental issues.
5. Inculcating discipline in students and make them technologically and ethically strong.

VISION OF THE DEPARTMENT

To produce globally competent Electrical and Electronics Engineers who can cater to the contemporary needs of the Industry and Society.

MISSION OF THE DEPARTMENT

M1: To provide a good infrastructure and serene environment to cater the curriculum requirements of Electrical and Electronics Engineering.

M2: To motivate the students and faculty towards research activities in association with industries.

M3: To provide a conducive environment for students to enhance their co curricular, soft skills and ethical values for their career development.

M4: To stimulate continuing education for creating quality engineers towards sustainable improvement in the society.

PROGRAM EDUCATIONAL OBJECTIVES

PEO 1: Procure optimum solution for Electrical Engineering problems in order to cater a successful professional career.

PEO 2: Demonstrate creativity in the engineering practices including entrepreneurial and collaborative ventures with strategic thinking, planning and execution for lifelong learning.

PEO 3: Exhibit to communicate effectively, recognize and incorporate societal needs and constraints in their professional endeavours and practice the profession with high regard to legal and ethical responsibilities.

PROGRAM SPECIFIC OUTCOMES:

PSO 1: Shall have Potential to analyze, design, synthesize and provide technical solutions in the field of Power generation, distribution, renewable energy systems and Embedded Systems.

PSO2: Shall exhibit leadership skills, pursue entrepreneurship and contribute in the field of Electrical and Electronics Engineering.

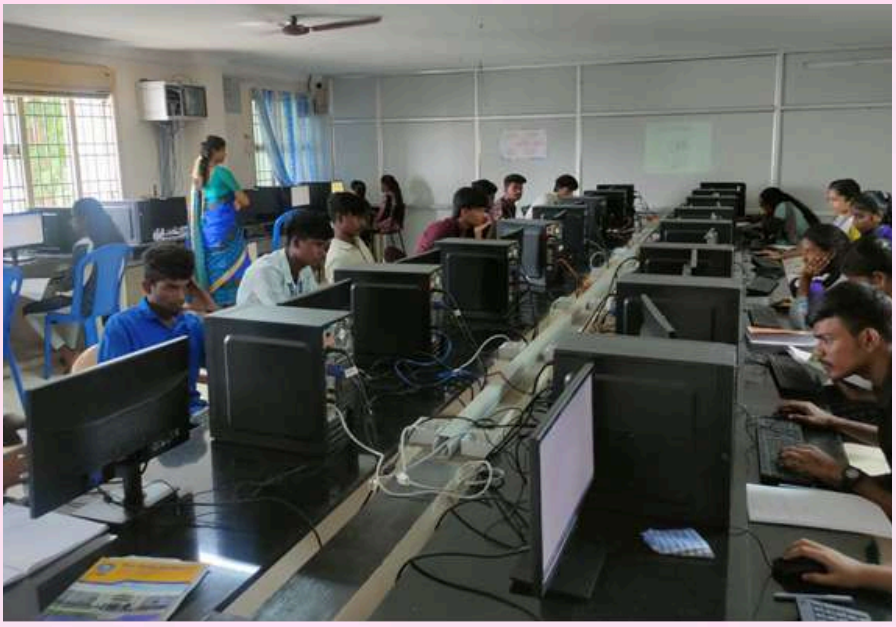
INDEX

- Events Organized - 01
- Student Achievements - 06
- Alumni Corner - 08
- Events Attended - 10
- Faculty Achievements - 11
- Faisca 2k22
- Committee list - 15
- Abstracts - 18
- Technical Article - 23
- Art Gallery - 30
- Memories - 36

EVENTS ORGANIZED

CERTIFICATE COURSE

New Prince Shri Bhavani College of Engineering and Technology successfully organized a certificate course on "Programmable Logic Controller" (CC10506) for final-year students. Held every Sunday from September 19 to October 24, 2021, the course saw the participation of 40 students from the Electrical and Electronics Engineering (EEE) and Mechanical departments, all of whom enhanced their skills in PLC technology. The program was expertly coordinated by Mr. K. Sarathy.



GUEST LECTURE

The Department of Electrical and Electronics Engineering (EEE) hosted a guest lecture on October 10, 2021, featuring Mrs. R. Priyadharshini, Associate Professor from Sri Ramanujan Engineering College, Chennai. She shared her insights on the topic, "Introduction to Total Quality for Achieving Organizational Excellence." The event aimed to inspire participants to foster innovative ideas and pursue entrepreneurship. Ms. R. Revathi, the Program Coordinator, delivered the vote of thanks during the valedictory function.

HYBRID ENERGY WORKSHOP

A workshop on hybrid energy generation was held on December 28, 2021. Dr. Venkatramanan, Group Director at the Indira Gandhi Center for Atomic Research in Kalpakkam, served as the resource person for the session. He discussed the design, development, and testing of nuclear reactors.

INNOVATION

On February 7, 2022, the Institution's Innovation Council, in collaboration with the Department of Electrical and Electronics Engineering, organized the "INDIA STARTUP DAY" celebration. The program began with an introduction by Dr. R. Venkatasubramanian, Professor and Head of the EEE department, who discussed the session and highlighted opportunities for startups. Following this, Mr. P. Aswin Surendar, the Proprietor of OMEGA ABRASIVES in Chennai and a distinguished alumnus of the EEE department, presented the latest startup case studies.

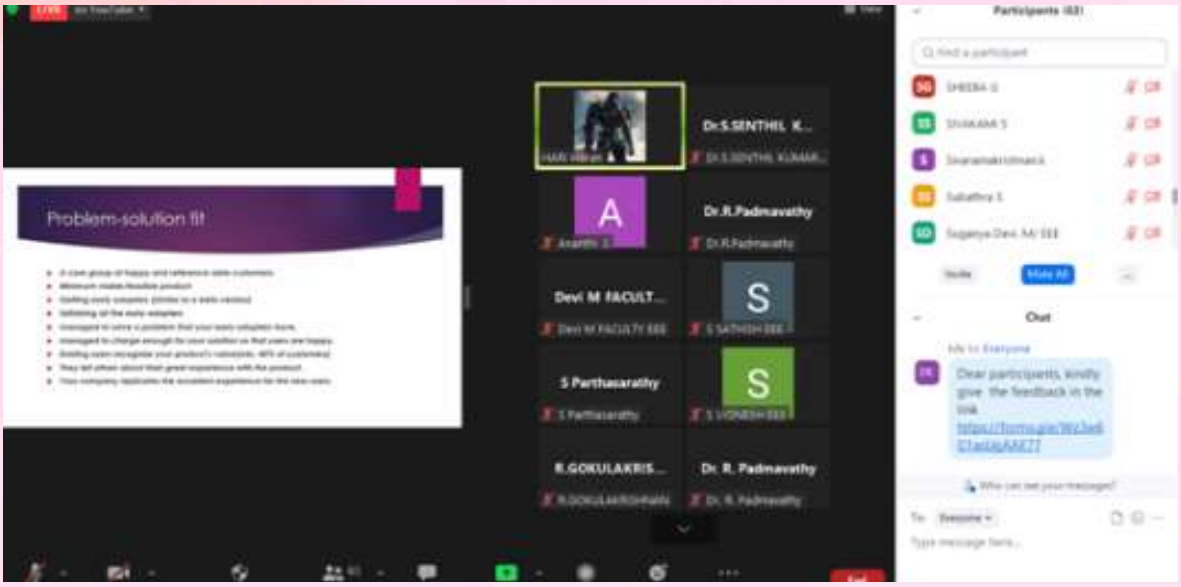
WORKSHOP

Two-Day Workshop on Renewable Energy (Jan 3-4, 2022)

The workshop, conducted on January 3-4, 2022, featured Dr. M. Rajkumar, Principal of J.P. College of Engineering in Ayikudi, as the esteemed resource person. An expert in renewable energy, Dr. Rajkumar delivered comprehensive sessions on alternative sources for electrical energy production and emerging trends in sustainable energy solutions. The workshop offered valuable insights for aspiring engineers.

WEBINAR

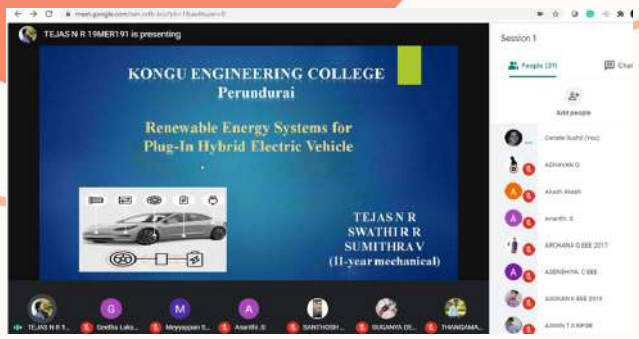
On January 8, 2022, at 2 PM, the department hosted a virtual webinar aimed at equipping students with vital startup skills. The session focused on helping students address challenges in startup development, understanding the concepts of problem-solution fit and product-market fit, and fostering innovative thinking for successful entrepreneurship.



ENVIRONMENTAL CONSERVATION EFFORT OF OUR STUDENTS:

On March 11, 2022, our students actively participated in a Beach Cleaning Programme organized by Bhumi, demonstrating their strong commitment to environmental conservation and social responsibility. Their efforts in helping to preserve the coastal environment were greatly appreciated by the organizers, and in recognition of their dedication, Bhumi awarded each student with a certificate of appreciation. This initiative not only helped to enhance the students' awareness of environmental issues but also fostered a sense of responsibility towards the community and the planet.

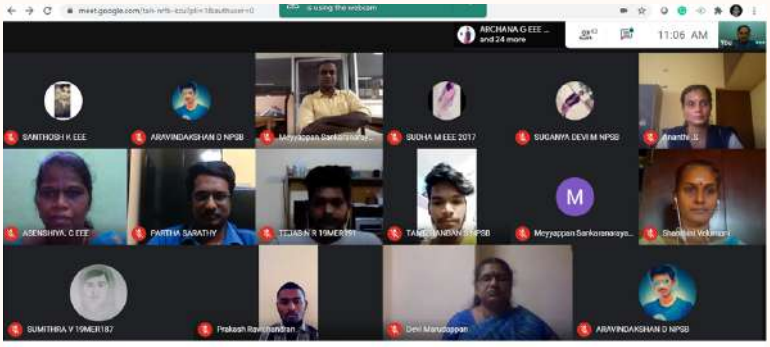
GLIMPSE OF FAISCA 21

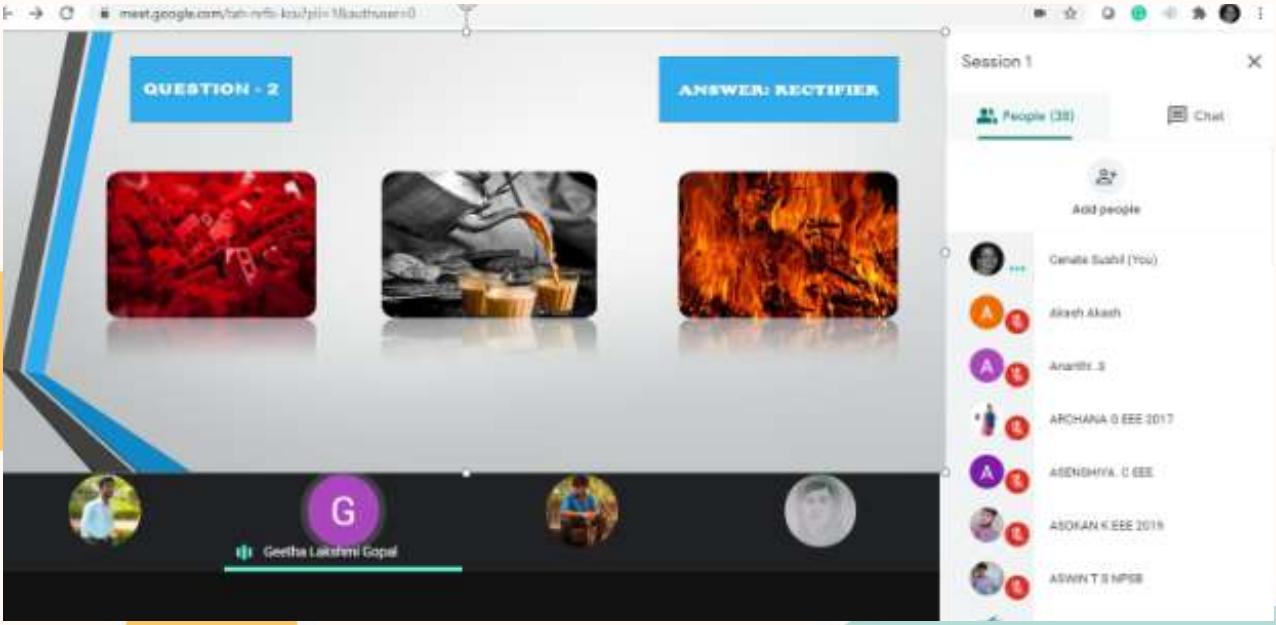


A **Technical Quiz** was successfully held on November 12, 2021, as part of FAISCA '21, a national-level technical symposium conducted virtually via Zoom. The event saw active participation from 50 participants representing various institutions and featured the engaging "Technical Connexions" round. Winners were awarded e-certificates and cash prizes.

FAISCA '21: National Level Technical Symposium

A successful **Paper Presentation** event was held as part of FAISCA '21, a national-level technical symposium conducted virtually via Zoom. Highlights of the event include the active participation of 30 participants from various institutions, the presentation of cash awards and e-certificates to prize winners, and a valuable platform for students to showcase their innovative ideas and research.





STUDENT ACHIEVEMENTS

P. Shobana, a final-year EEE student, demonstrated her literary prowess by participating in the Tamil Poetry event, held at our institution on January 11-12, 2021.


New Prince Shri Bhavani
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Tambaram-Velachery Main Road, Seelhaapuram, Chennai-600 073

Two Days Virtual Intra College Fest
Youth Pulse '21
Date: 11th & 12th Jan 2021

Certificate

This is to certify that P SHOBANA of the Dept. of EEE has participated in the event TAMIL POETRY conducted by **New Prince Shri Bhavani College of Engineering and Technology** on the 11th and 12th of January 2021.

Principal
Dr.T.Saravanan

www.facebook.com/npsbcetofficial twitter.com/newprinceengg www.instagram.com/newprinceengg_official

Priyanka V, a student of NPSCET, successfully completed the "Introduction to Basic Game Development using Scratch" course along with project work, showcasing her proficiency in game development.


coursera
project
network

Feb 23, 2022

Priyanka V

has successfully completed

Introduction to Basic Game Development using Scratch

an online non-credit course authorized by Coursera Project Network and offered through Coursera

Stacey Shanklin-Langford

Stacey Shanklin-Langford
Subject Matter Expert
Freedom Learning Group

COURSE
CERTIFICATE

EDUCATION FOR EVERYONE
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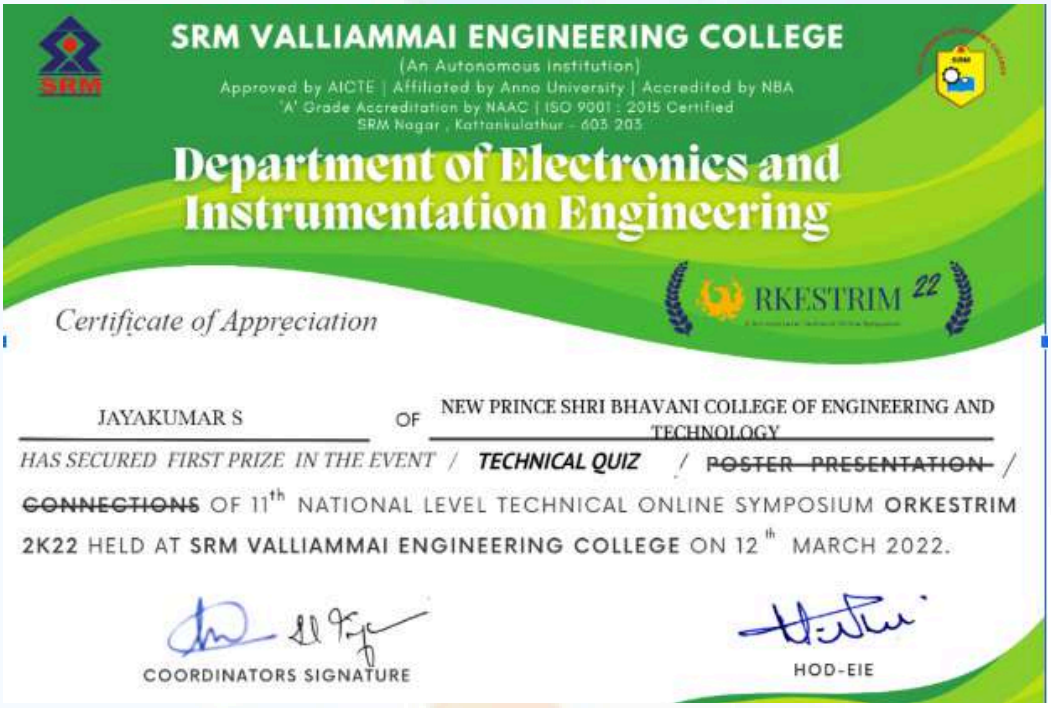
COURSE CERTIFICATE

Verify at:
coursera.org/verify/A437VC9B8XW

NPSCET students excelled at the Technical Quiz held at SRM Valliammai Engineering College on March 12, 2022. Jayakumar S. and Robinson R. secured the 1st Prize, while S. Vignesh and Milson Bharath D. were awarded Participation Certificates for their commendable efforts.



SRM VALLIAMMAI ENGINEERING COLLEGE
(An Autonomous Institution)
Approved by AICTE | Affiliated by Anna University | Accredited by NBA
'A' Grade Accreditation by NAAC | ISO 9001 : 2015 Certified
SRM Nagar , Kattankulathur - 603 203

Department of Electronics and Instrumentation Engineering

RKESTRIM 22

Certificate of Appreciation

JAYAKUMAR S OF NEW PRINCE SHRI BHAVANI COLLEGE OF ENGINEERING AND TECHNOLOGY

HAS SECURED FIRST PRIZE IN THE EVENT / TECHNICAL QUIZ / ~~POSTER PRESENTATION~~ / ~~CONNECTIONS~~ OF 11th NATIONAL LEVEL TECHNICAL ONLINE SYMPOSIUM ORKESTRIM 2K22 HELD AT SRM VALLIAMMAI ENGINEERING COLLEGE ON 12th MARCH 2022.

COORDINATORS SIGNATURE

HOD-EIE

E. Ajithkumar, T.S. Aswin, E. Nanthakumar, and G. Ramkumar presented a paper titled "Arduino-Based Intelligent Walking Stick for Physically Impaired Persons" at the Virtual International Conference on Power and Energy Systems (ICPES2K21), organized by P.S.R. Engineering College, Sivakasi, on May 7-8, 2021. Their outstanding work earned them the prestigious Best Paper Award.

P.S.R ENGINEERING COLLEGE
(An Autonomous Institution, Affiliated to Anna University, Chennai)
(Accredited By NAAC with A+ Grade, NBA & Recognized Under 2(F)12(B) Of The UGC Act.1956)
Sivakasi -626 140 , Virudhunagar Dist. Tamilnadu

Department of Electrical and Electronics Engineering

Best Paper Award

This is to certify that ~~Dr/Mr/Ms~~ E.AJITHKUMAR of New Prince Shri Bhavani College Of Engineering And Technology, Chennai has been received best paper award a paper entitled Arduino Based Intelligent Walking Stick For Physically Impaired Persons in the Virtual International Conference on Power and Energy Systems 'ICPES2K21' organized by P.S.R ENGINEERING COLLEGE, Sivakasi, on 7th & 8th May 2021.

Co-ordinators (Dr.S.Edwin Jose) (Dr.V.Seetharaman)

Convener (Dr.R.Madavan)

Principal (Dr.B.G.Vishnuram)

AN ALUMNI'S PERSPECTIVE

D KISHORE
BATCH 2009-2013
CHIEF MANAGER-ALLIANCE INSURANCE BROKERS LTD., BANGALORE

It is both an honor and a pleasure to stand before you today as a proud alumnus of this esteemed institution. As I reflect on my journey since graduating in 2013, I am filled with immense gratitude for the foundation laid here that has significantly shaped my career and personal growth.When I first walked through the gates of this college, I was filled with excitement and curiosity, not fully understanding the path that lay ahead. I am grateful for the dedication of our professors, who imparted knowledge and wisdom, guiding us not only in our studies but also in our lives.

Today, I serve as the Chief Manager at Alliance Insurance Brokers Ltd. in Bangalore. My role has been both challenging and rewarding, allowing me to apply the knowledge I gained here in real-world scenarios. The importance of adaptability, communication, and strategic thinking—skills honed during my time at this institution—have proven to be vital in my journey.

Remember, success is not just about individual accomplishments; it is also about lifting each other up and creating a supportive community. In closing, I would like to express my heartfelt gratitude to the faculty, staff, and fellow alumni for their unwavering support. Together, let us continue to uphold the values instilled in us and strive for excellence in all our endeavors.

THANK YOU.

R RAKESH
BATCH 2010-2014
MANAGER-PROCUREMENT ENGINEERING,
LOTTE INDIA CORPORATION, CHENNAI

It's a great pleasure to be back on the New Prince Shri Bhavani College of Engineering and Technology campus today, reflecting on my time at this esteemed institution. I've been fortunate enough to pursue a fulfilling career in procurement engineering, currently serving as ManagerProcurement Engineering at Lotte India Corporation in Chennai.

My journey began here, where I laid the foundation for my professional aspirations. The rigorous academic curriculum, coupled with the practical exposure I gained through projects and internships, has been invaluable in navigating the complexities of the corporate world.

I'm particularly grateful for the mentorship and guidance I received from my professors, which helped me develop a strong analytical mindset and problem-solving abilities. Looking back, I'm inspired by the countless achievements of our New Prince Shri Bhavani College of Engineering and Technology alumni community. Our college has produced leaders in various fields, and I'm proud to be a part of this legacy. I encourage you all to stay connected to your alma mater and continue to support the next generation of students. Let's raise a toast to New Prince Shri Bhavani College of Engineering and Technology, our professors, and our fellow alumni, whose contributions have made our college a beacon of excellence."

THANK YOU

Events Attended

SOCIAL RESPONSIBILITY INITIATIVE

To raise awareness about the COVID-19 pandemic, a campaign titled “Each One Reach One Covid Mission” was held on the college campus on Wednesday, September 8, 2021. During this event, the importance of adhering to safety measures and the significance of vaccination were emphasized. Students and faculty members from our department contributed their valuable services to share knowledge and experiences related to COVID-19. Many participants from the neighborhood and the public attended the campaign, gaining insights on safety measures and information about vaccination doses to help prevent the spread of COVID-19.


Bhumi

Certificate of
Social Responsibility

Ms. / Mr. Dinesh. V
volunteered with Bhumi on 11-Mar-2022 and participated in
the Clean Up Drive Event. Her / His contribution
has been invaluable and Bhumi deeply appreciates the services rendered.

ignite

Authorised Signatory

one of India's largest non-profit volunteer organisations enabling thousands across India to volunteer for education and civic issue

Training Attended

Milson Bharath D. successfully completed an internship at National Gears Training from May 21, 2021, to July 5, 2021, gaining valuable hands-on experience.

Faculty Achievements

PUBLICATIONS

Dr. S. Parthasarathy, a professor in the Electrical and Electronics Engineering department, filed a patent for "Security Protocol to Prevent Attacks from Programmable Matter in IoT Networks," which was granted on February 21, 2021.

Dr. S. Senthilkumar, a professor in the Electrical and Electronics Engineering department, filed a patent titled "Cloud Data Stored on FOG IoT Platform," which was granted on August 12, 2021.

FDP ATTENDED

Dr. S. Senthilkumar participated in a six-day International Faculty Development Program (FDP) on “Trends in Automotive Technology,” held from May 17 to May 22, 2021.

Mr. K. Sarathy has completed 14 days Online FDP on “Entrepreneurship” from 20-01-2021 to 04-02-2021.

Dr.S.Parthasarathy , Dr.C.F.Theresa Cenate, Dr.S.Sendilkumar, Dr.S.Senthilkumar ,Ms.S.Ananthi , Mrs.M.Devi have attended AICTE Sponsored Two Week Online FDP on “Applications of Machine Learning and Deep Learning in Electrical Engineering Series II" from 24-05-2021 to 05-06-2021.


KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C.Nagar, K.Vellakulam - 625 701, (Near Virudhunagar), Madurai District.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
AICTE SPONSORED TWO WEEK ONLINE FDP
ON
"APPLICATIONS OF MACHINE LEARNING & DEEP LEARNING IN ELECTRICAL ENGINEERING" SERIES-II
(24th May – 05th June, 2021)
Certificate of Participation
This is to certify that Mrs. ANANTHI.S, Assistant professor, New Prince Shri Bhavani College of Engineering and Technology, Chennai has actively participated in the AICTE SPONSORED TWO WEEK ONLINE FDP ON "APPLICATIONS OF MACHINE LEARNING & DEEP LEARNING IN ELECTRICAL ENGINEERING" SERIES-II organized by Department of Electrical and Electronics Engineering, Kamaraj College of Engineering and Technology, S.P.G.C Nagar, K.Vellakulam, Madurai District, Tamilnadu from 24th May to 05th June, 2021.
Dr. S.Kalyani
Professor / EEE
Dean (Examinations)
Coordinator
AICTE
Dr.D.Prince Winston
Prof & Head/EEE
Convener

Dr. R. Venkatasubramanian attended the National Seminar on Artificial Intelligence in Electrical Drives, organized by SSN College of Engineering in Chennai in collaboration with the SSN - ISTE chapter, on February 12, 2022.

Sri Sivasubramaniya Nadar College of Engineering

An Autonomous Institution, Affiliated to Anna University

Rajiv Gandhi Salai, Kalavakkam–603110

Department of Electrical and Electronics Engineering

Certificate of Participation

This is to certify that

Dr.R.Venkatasubramanian

of

New Prince Shri Bhavani College of Engineering & Technology, Chennai

has participated in National Seminar on Artificial Intelligence in Electrical Drives organized by SSN – IIC4.0 in association with SSN-ISTE Chapter on February 12,2022.

Coordinator, ISTE - Faculty Chapter | Head of the Department | Principal

Ms. R. Revathi participated in a faculty development program on "Recent Developments in Generation and Control in Modern Power Systems," organized by Velagapudi Ramakrishna Siddhartha Engineering College in Vijayawada, Andhra Pradesh, from March 7 to 12, 2022.

GMRIT Training Tomorrow's Engineers Today

Faculty Development Programme

Certificate of Participation

This is to certify that Ms R.REVATHI from NEW PRINCE SHRI BHAVANI COLLEGE OF ENGINEERING AND TECHNOLOGY has participated in One Week online Faculty Development Programme on "Recent Advancements in Generation and Control in Modern Power Systems" jointly organized by the Department of Electrical & Electronics Engineering, GMR Institute of Technology, Rajam and Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada, Andhra Pradesh, India held between 7th -12th March 2022.

Dr. M. Rambabu, Co-Convenor | Dr. P Ramana, Convenor, HOD | Dr. C L V R S V Prasad, Principal, GMRIT | Dr. B. V. Rao, Co-Convenor | Dr. P V R L Narasimham, Convenor, HOD | Dr. A.V.Ratna Prasad, Principal, VRSEC

Dr. S. Senthil Kumar, Dr. C. F. Theresa Cenate, Dr. S. Parthasarathy, Mrs. M. Devi, and **Mr. K. Kumarasaravanan** participated in a five-day Faculty Development Program (FDP) on "Bio-Inspiring Learning," organized by Sri Sairam Engineering College, Chennai.

Mrs. S. Ananthi participated in a five-day ATAL Faculty Development Program (FDP) on "Machine Learning in Infotainment Systems," held from December 13-17, 2021, and organized by BNM Institute of Technology.

FAISCA 2K22

TECHNICAL SYMPOSIYUM

COMMITEE LIST

COMMITTEE MEMBERS FOR SYMPOSIUM

FAISCA '22

ORGANIZING MEMBERS

Convener:	Dr.R.VENKATSUBRAMANIAN, HOD/EEE
Co- Convener:	Mrs.M.Devi, A.P/ EEE

OFFICE BEARER'S

President: Vice	C.Nithishwaran – IV EEE
President:	M.Tamil selvan-III EEE
Secretary:	T.Sowmiya– IV EEE
Joint Secretary:	D.Milson Bharath – III EEE
Treasurer:	E.Nanthakumar– IV EEE
Join Treasurer:	A.Ravin kumar – III EEE

EDITORIAL COMMITTEE

Staff In-Charge	**1)** Dr.S.Senthil Kumar, Assoc.Prof/ EEE
Students In-Charge	**1)** E.Ajithkumar – IV EEE
	2) T.S.Aswin – IV EEE
	3) S.K.S.Rohini – IV EEE
	4) K.Asokan – III EEE
	5) K.Santhosh – III EEE

REGISTRATION & E- CERTIFICATE

Staff In-Charge:

1) Mrs.R.Revathy, A.P/EEE

Students In-Charge:

1)V.Boobalan – IV EEE
2) V.Dhanalakshmi– IV EEE
3) N.Praveen– IV EEE
4) S.Selvanayagam – III EEE
5) D.Milson Bharath – III EEE
6) K.Santhosh – III EEE
7) R.Robinson– II EEE

PAPER PRESENTATION

Staff In-Charge:

1) Dr.S.Parthasarathy Prof/EEE

Students In-Charge:

1) T.Datchinamurthy– IV EEE
2) G.Ramkumar– IV EEE
3) M.Suganya Devi– IV EEE
4)K.Asokan – III EEE
5)M.Tamil selvan – III EEE

E- CREATION

Staff In-Charge:

1) Ms.S.Ananthi, Assoc.Prof/EEE
2) Mr.K.Sarathy, A.P/EEE

Student In-Charge:

1)S.K.S. Rohini – IV EEE
2)B. Jeyasingh – IV EEE
3)T.Datchinamurthy – IV EEE
4)D.Milson bharath-III EEE

TECHNICAL QUIZ

Staff In-Charge:

Mrs. Devi, Assoc.Prof/EEE

Students In-Charge:

1)T.Sowmiya– IV EEE
2)B.Jeyasingh– IV EEE
3)D.Milson Bharath– III EEE
4)M.Tamil selvan – III EEE
5)V.Dinesh – II EEE

FIGHT WITH FIRE

Staff In-Charge:

1) Mr. K. Sarathy, A.P/EEE
2) Mr. K. Kumara Saravanan, A.P/EEE

Student In-Charge:

1) S. Sasi Kumar – IV EEE
2) R. Vijay Jothi – IV EEE
3) S. Selvanayagam – III EEE
4) S. Tamilzhanban – III EEE
5) E. Ajith Kumar – III EEE
6) K. Asokan – II EEE

ABSTRACTS

PWM and PFM Controlled Buck Converter designed for Wearable Electronic Devices

R.Snega D.Nandhiya K.Priya Rajalakshmi
Institute of Technology,Chennai.

This paper presents an Integrated Pulse-Width Modulation (PWM) and Pulse-Frequency Modulation (PFM) controlled buck converter designed for wearable electronic devices. The input voltage is set at 3.6V, while the average output voltage is regulated to 1.7V. The buck converter achieves a maximum efficiency (η) of 81.43% with a load current (ILoad) of 68mA. Notably, when the load current is below 8mA, the efficiency of the PFM controlled buck converter is approximately 7% higher than that of the PWM controlled buck converter.

WATER MANAGEMENT SYSTEM USING IOT

P Revathi, T Mrunalini, M Niranjana
SRM TRP Engineering College,Tiruchirappalli

This project focuses on filtering raw water from various sources, such as rainwater, groundwater, borewell water, lakes, and rivers, before storing it in a water tank for drinking purposes. The primary goal is to measure and maintain the Total Dissolved Solids (TDS) value and pH level, targeting a range of 30 to 400 ppm and neutrality, respectively, to improve water quality for safe consumption. The entire process is monitored using an open-source Internet of Things (IoT) application that operates over the internet or a local area network.To measure TDS and pH levels, necessary sensors are connected to a NodeMCU controller. Based on the sensor outputs, an antiscalant liquid is injected using a submersible pump to maintain these essential parameters in the drinking water. Data is transmitted to the cloud through an Android device, enabling real-time monitoring. The IoT application automatically updates the values every 15 seconds, displaying the date and time of the recorded TDS and pH levels in the drinking water.

OPTIMAL LOCATIONS OF ENERGY STORAGE DEVICES IN LOW-VOLTAGE GRIDS

S Sowmiya , Suresh M , Sundar S
Anand Institute of Higher Technology, Chennai.

This paper presents a methodology for the optimal placement of storage devices in low-voltage grids, using the CIGRE low-voltage benchmark grid as a case study. The focus is on determining the optimal locations and sizes of storage devices to maximize the integration of renewable energy sources, such as photovoltaic or wind, in a local residential area while adhering to all grid constraints. The problem is formulated as a mixed-integer quadratic programming model, with the objective function representing total annual costs. These costs encompass the annualized investments in storage devices, operation and maintenance expenses, and electricity costs categorized into purchased/sold electricity and network losses. Our model accounts for variations in energy production and consumption by employing daily variation curves for each month of the year. We demonstrate that strategically placing and sizing storage devices can maximize the utilization of renewable energy sources within the analyzed network while minimizing costs, even in scenarios with unfavorable feed-in tariffs.

REACTIVE POWER CONTROL OF SINGLE PHASE GRID CONNECTED PHOTOVOLTAIC SYSTEM

V Iniya , P Maniraj S Anushiya , M Sarathapriya
M.Kumarasamy College of Engineering, Karur.

This paper discusses the compensation of reactive power delivered to the grid-connected inverter of a photovoltaic system. Due to varying weather conditions, solar irradiance fluctuates, resulting in inconsistent power delivery to the grid, which can lead to voltage drops and poor power factor issues. The integration of renewable energy sources into the grid can be achieved without the use of line frequency transformers, preserving system characteristics. In this study, a LUO converter is designed and implemented alongside a single-phase inverter to connect the solar PV system to the grid without utilizing a transformer. A fuzzy logic controller is developed to optimize power extraction from the photovoltaic system, while a PI controller is employed to regulate the active and reactive power transfer to the grid. MATLAB simulation results demonstrate effective control of reactive power in the grid-connected photovoltaic system.

CONTACTLESS ENERGY TRANSMISSION ANDINFORMATION DATA THROUGH A COMMON INDUCTIVE LINK

B Prasad, Ajith George
A.V.C College of Engineering , Mayiladuthurai.

One promising direction in contactless energy transmission systems is the implementation of parallel two-way communication between the transmitting and receiving sides using the same inductive link. This approach eliminates the need for additional modules to transmit information and control signals, thereby enhancing the technical and operational parameters of wireless power and data transfer systems. This report presents the findings of a frequency multiplexing analysis. A computer simulation of the developed system was conducted, and the analytical results were validated through both computer simulations and real experiments using a specially developed laboratory setup.

IOT BASED HOME AUTOMATION SYSTEM USING RASPBERRY PI

T Maragatham P Balasubramanie M Vivekanandhan
Kongu Engineering College, Erode.

This paper presents an advanced home automation system that leverages an Android application for controlling and monitoring household appliances. The design is based on the Internet of Things (IoT), allowing all home devices to be interconnected and operated without human intervention.

In this system, a Raspberry Pi 4 is integrated with various sensors that monitor parameters such as temperature, humidity, light, and energy consumption. These sensors collect data, which is stored in a database for analysis. The data analysis helps users identify the typical times when appliances are on or off, enabling automated operation for enhanced convenience and efficiency. controlled with no human intercession by watching the normal use design. The client moreover turns on/off remotely by means of mobile application and web-server.

DESIGN AND REALIZATION OF INTERLEAVED PFC CONVERTER

Gowtham K, Anwar Wasim A
Prince Shri Venkateswara College of Engineering and Technology, Chennai.

This paper introduces a straightforward design for an interleaved Power Factor Correction (PFC) converter utilizing Gallium Nitride (GaN) transistors and Silicon Carbide (SiC) diodes. The operating principles are concisely explained, accompanied by simplified schematics. A prototype has been constructed and tested in the lab to validate the design. Experimental results are provided to support the theoretical analysis and showcase the converter's performance. The primary objective was to highlight the capabilities of GaN transistors and SiC diodes in high-power applications.

DESIGN AND ANALYSIS OF ALL–TERRAIN ELECTRIC VEHICLE

Gowtham Rajan N, Deepak.
Hindusthan College of Engineering and Technology, Coimbatore.

Science serves as a double-edged sword in the modern world, driving a revolution in the transportation industry. The reliance on coal, oil, and diesel fuels releases significant amounts of harmful gases, contributing to ozone layer depletion, global warming, and climate change. As global oil consumption rises and production declines, there is an urgent need to shift the transportation sector away from fossil fuels and toward electrical and electronic power sources.This shift underscores the necessity for innovations that promote green energy, such as utilizing electricity to charge electric vehicles instead of relying on traditional internal combustion engines. This research paper explores the design and analysis of the roll cage, suspension system, steering mechanism, braking system, and powertrain configuration of an All-Terrain Electric Vehicle (ATV). The vehicle is engineered to navigate challenging terrains where conventional vehicles struggle. It is also designed with commercial viability in mind. The project aims to enhance existing models by integrating an improved system while adhering to various design aspects that meet automotive safety regulations.

CONTACTLESS MEASUREMENT OF ELECTRICAL CURRENT

Vignesh S Rajalashmi K
A.V.C College of Engineering, , Mayiladuthurai.

Magnetic field sensors are increasingly utilized in both household and engineering applications due to their significant advantage of measuring various electrical parameters through the detection of magnetic fields, leveraging advanced sensors for electric current measurement. This article introduces a developed sensing module designed specifically for measuring electrical current. The experimental measuring module is based on a magneto-sensitive integrated circuit featuring a Hall element. The article includes a detailed block diagram, a general electrical circuit, and the results of experimental studies conducted to validate the module's effectiveness.

DESIGN AND IMPLEMENTATION OF SOLAR PANEL AS SMART MONITORING USING IOT

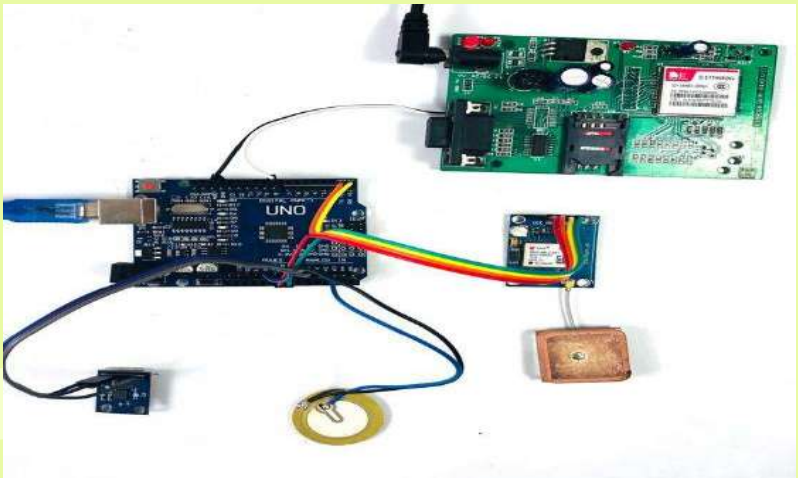
N. Dhanasekar, S. Soundarya
Chennai Institute of Technology, Chennai.

This work presents an interconnected multi-server IoT network designed for the monitoring and control of smart solar panels. The network is structured in a three-layer architecture, with a sensor node at the lowest layer responsible for collecting sensor data. The solar panel server, situated above it, samples the data by triggering the sensor node's software. Once data collection is successfully completed, the panel server communicates the information to a central server, which is responsible for the aggregation, visualization, storage, analysis, and control of all connected solar panels.The paper also addresses the implementation aspects of the network and showcases the data collected from the solar panels. This IoT network aims to enhance the functionality of solar panels beyond mere power generation, enabling applications such as security, surveillance, pollution monitoring, and much more.

TECHNICAL ARTICLE

WIRELESS BLACK BOX USING MEMS ACCELEROMETER AND GPS TRACKING FOR ACCIDENTAL MONITORING OF VEHICLES

This paper is about creating a wireless black box using MEMS accelerator and GPS tracking system for accidental tracking. The system includes a combination of accelerometer, microcontroller unit, GPS device and GSM module. In the event of an accident, the wireless device sends a short message via mobile phone to family members, emergency medical services (EMS) and a GPS system to the nearest hospital. Gate mechanism and motorcycle speed are used to determine a fall or accident in real time. This paper uses a temperature sensor attached to a Raspberry Pi. With the help of a temperature sensor, we can measure the temperature at which the vehicle exits. This information is sent to family members, the Emergency Medical Service (EMS) and the nearest hospital. The system is compact and easy to install under rider seat. The system has been tested in real world applications using bicycles. The test results show that it can detect linear fall, non-linear fall and normal ride with high accuracy.



T.Datchanamurthy

IV Year

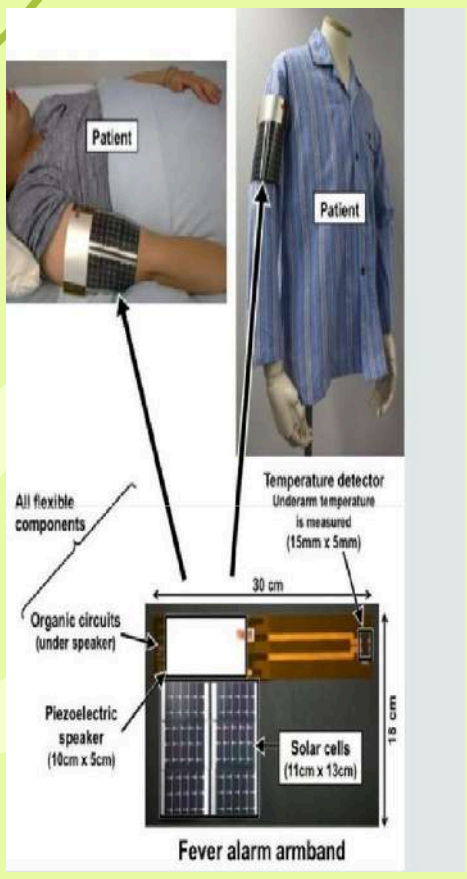
FEVER ALARM ARMBAND

Researchers have developed a 'fever alarm armband,' a flexible, self - powered wearable device that sounds an alarm in case of high body temperature. The flexible organic components developed for this device are well-suited to wearable devices that continuously monitor vital signs including temperature and heart rate for applications in healthcare settings. The armband is 30 cm long and 18 cm wide, and can be worn either directly on the skin or on top of clothing.

The device is designed so that the thermal sensor is located between the arm and the body. The organic power supply circuit is located under the piezo film speaker to reduce surface area.

Constant monitoring of health indicators such as heart rate and body temperature is the focus of intense interest in the fields of infant, elderly and patient care.

Sensors for such applications need to be flexible and wireless for patient comfort, maintenance-free and not requiring external energy supply, and cheap enough to permit disposable use to ensure hygiene.



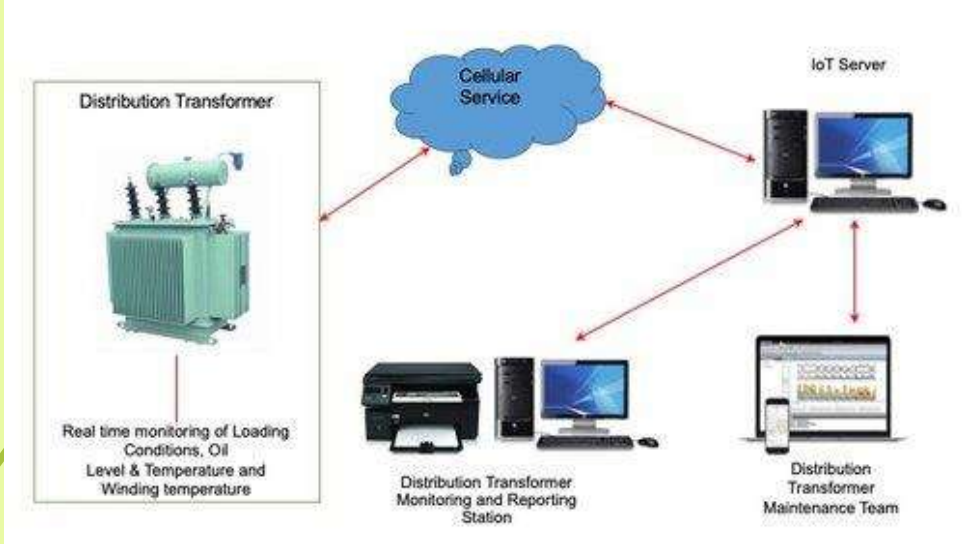
Fever alarm armband

B. Jeyasingh

IV Year

WIRELESS TRANSFORMER MONITORINGAND CONTROLLING SYSTEM

Transformers play an important role in the efficient transmission of electricity. Regular monitoring and maintenance can make it possible to detect new flaws before much damage has been done. Current systems can provide information about the state of a transformer, but they are either offline or very expensive to implement.



This onitoring system is primarily health monitoring equipment that can acquire, process, analyze & communicates the critical parameters to the concerned official who is at a remote place with the help of Auto dialing unit. Not only the conventional technical data, such as current, voltage, etc.,but also other critical information such as frequency, oil temperature, oil level etc of transformers is required by the operators to ensure reliable power delivery and to assist the day-to- day decision making activities. Thus, the system increases the reliability of distribution network.

T. Sowmiya
IV Year

SMART RAINWATER HARVESTING SYSTEM

Scarcity of water has become a predominant problem all over the world. Water plays an important role in agriculture. With majority of the Indian population dependent on farming for their daily needs, it's important to find a solution for scarcity of water. This paper mainly focuses on rain water harvesting.The Federal Energy Management Program (FEMP) identified rainwater harvesting systems as an alternative water technology. This technology overview is intended to provide agencies with key information to deploy rainwater harvesting systems.This project presents a model that does smart rainwater harvesting using IoT. The model consists of a structure with segregation that separates the rain water collected into the two tanks.A rainfall detection sensor is mounted on the top of the structure to detect whether it's raining or not.A pH sensor then determines the pH value of the rainwater and if the pH of the water is greater than 5 then the pump motor1 inside the main tank transfers the water to the tank A. If the pH of the water is less than 15 the pumpmotor 2 inside the main tank transfers the water to the tank B.The segregation is done so as to separate portable water.The water level sensor inside the tank A transfers the data in a timely manner to the cloud using IOT technology.GPS is implemented to track the location of the main tank.

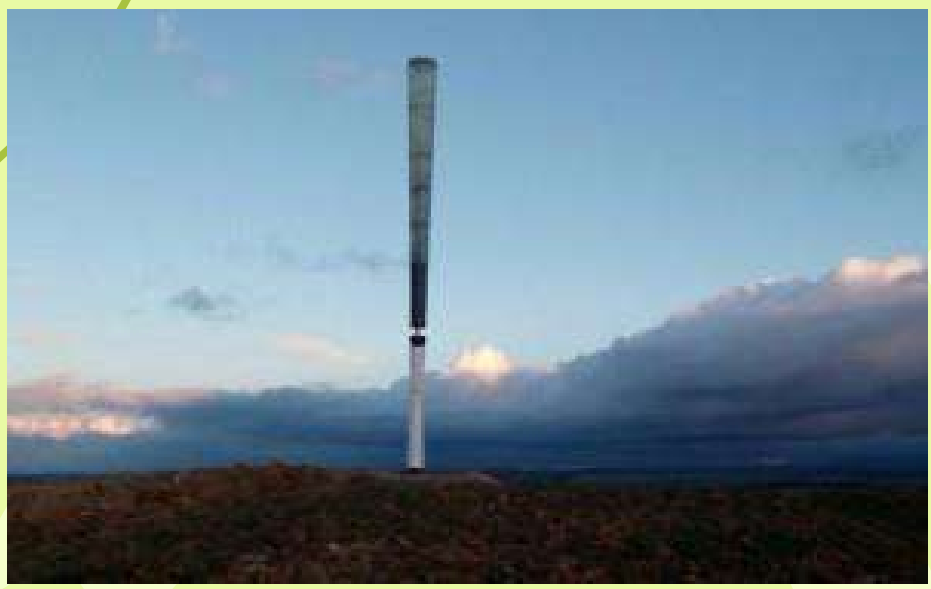
V. Dhanalakshmi

IV Year

New Wind Turbine Generates Electricity without Rotating Blades

This new wind turbine wobbles elegantly in the wind ,generating electricity without rotating blades. "It looks like asparagus," A Spanish company called Vortex Bladeless has produced a wind turbine that takes advantage of the vortices produced when wind moves around an obstacle. If you put any object in the path of the wind, it will create an undulating vortex behind the barrier. This is a problem that has plagued engineers for years: bridges have fallen due to wind eddies. Vortex Bladeless engineers have designed their turbine to take advantage of this vortex. The thin, cone-shaped turbine is made of carbon fiber and fiberglass with the motor at the bottom instead of the top (like traditional turbines) to improve sturdiness. The design ensures that the wind's vortex spins synchronously along the entire cone.

"The swirls have to work together to achieve good performance," Villarreal explains. There is also a ring of magnets at the base of the cone that give the rotations a boost regardless of wind speed.

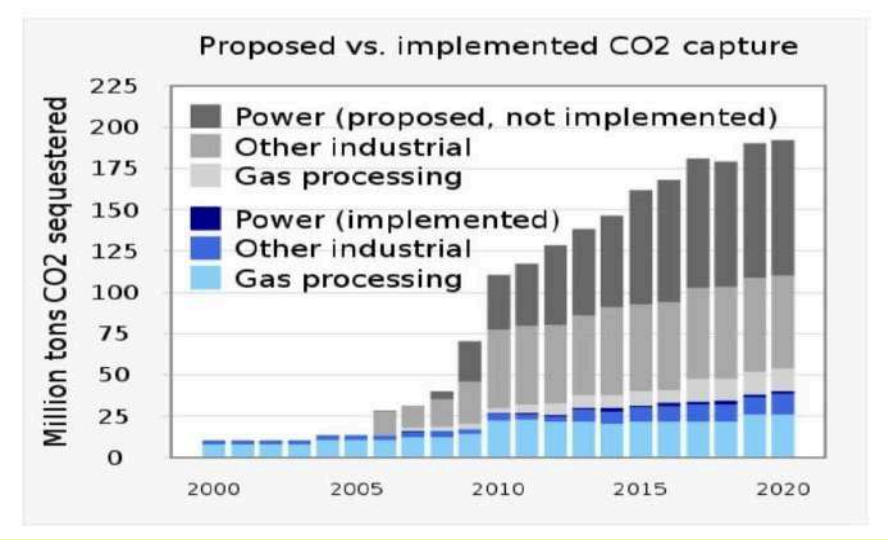


N. Praveen

IV Year

Carbon capture and Storage

Carbon capture and storage (CCS) or carbon of capturing carbon dioxide (CO2) before it enters the atmosphere, transporting it, and storing it (carbon sequestration) for centuries or millennia. Usually the CO2 is captured from large point sources, such as coal- fired power plant, a chemical plant or biomass power plant, and then stored in an underground geological formation. The aim is to prevent the release of CO2 from heavy industry with the intent of mitigating the effects of climate change.[3] Although CO2 has been injected into geological formations for several decades for various purposes, including enhanced oil recovery, the long-term storage of CO2 is a relatively new concept. Carbon capture and utilization (CCU) and CCS are sometimes discussed collectively as carbon capture, utilization, and sequestration (CCUS). This is because CCS is a relatively expensive process yielding a product with an intrinsic low value.

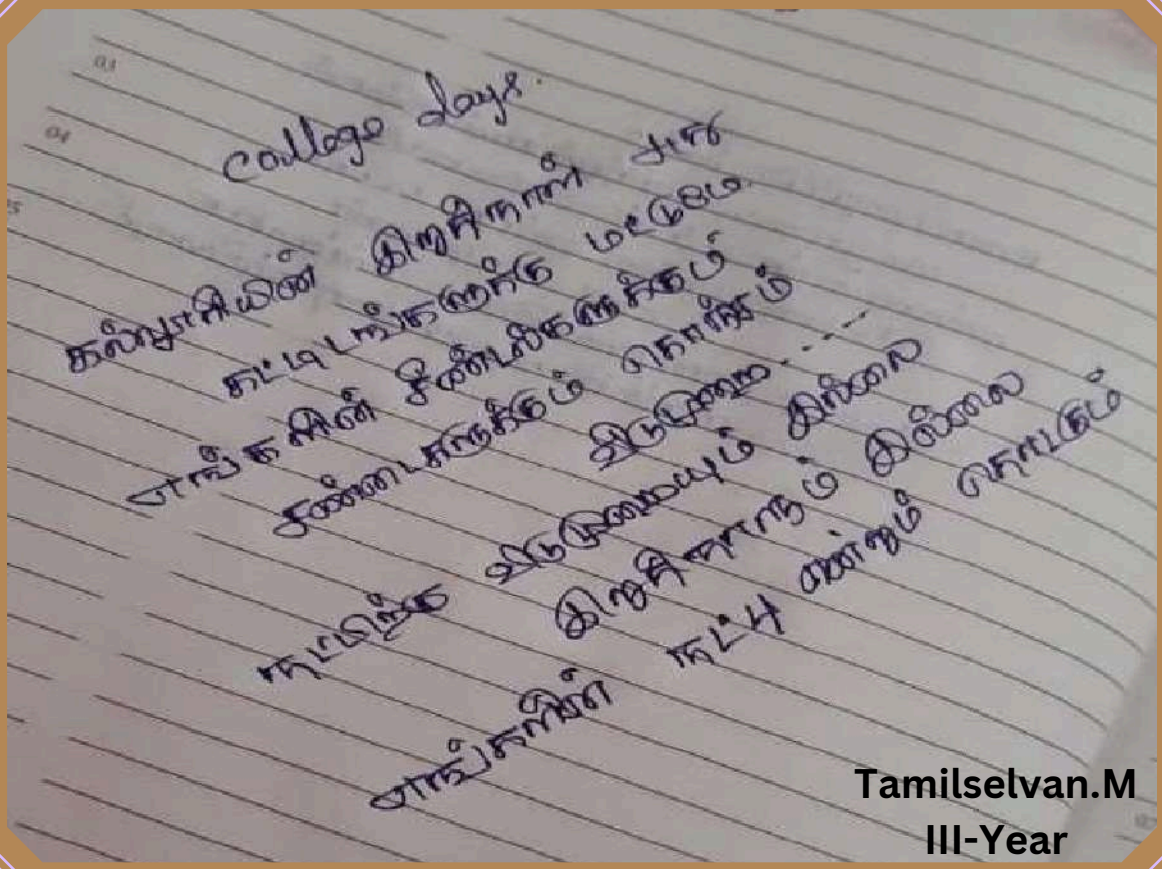


Global proposed vs. implemented annual CO2 sequestration. More than 75% of proposed gas processing projects have been implemented, with corresponding figures for other industrial projects and power plant projects being about 60% and 10%, respectively.

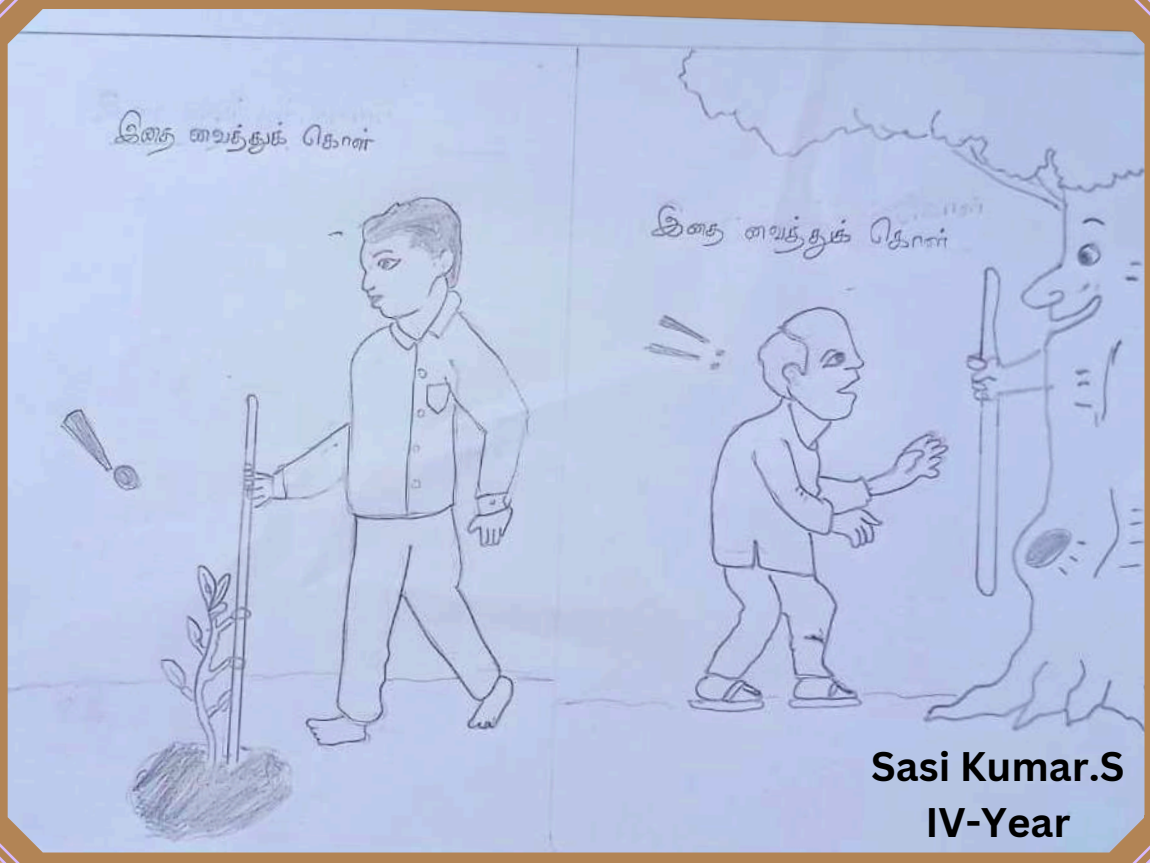
C. Nithishwaran

IV Year

ART GALLERY

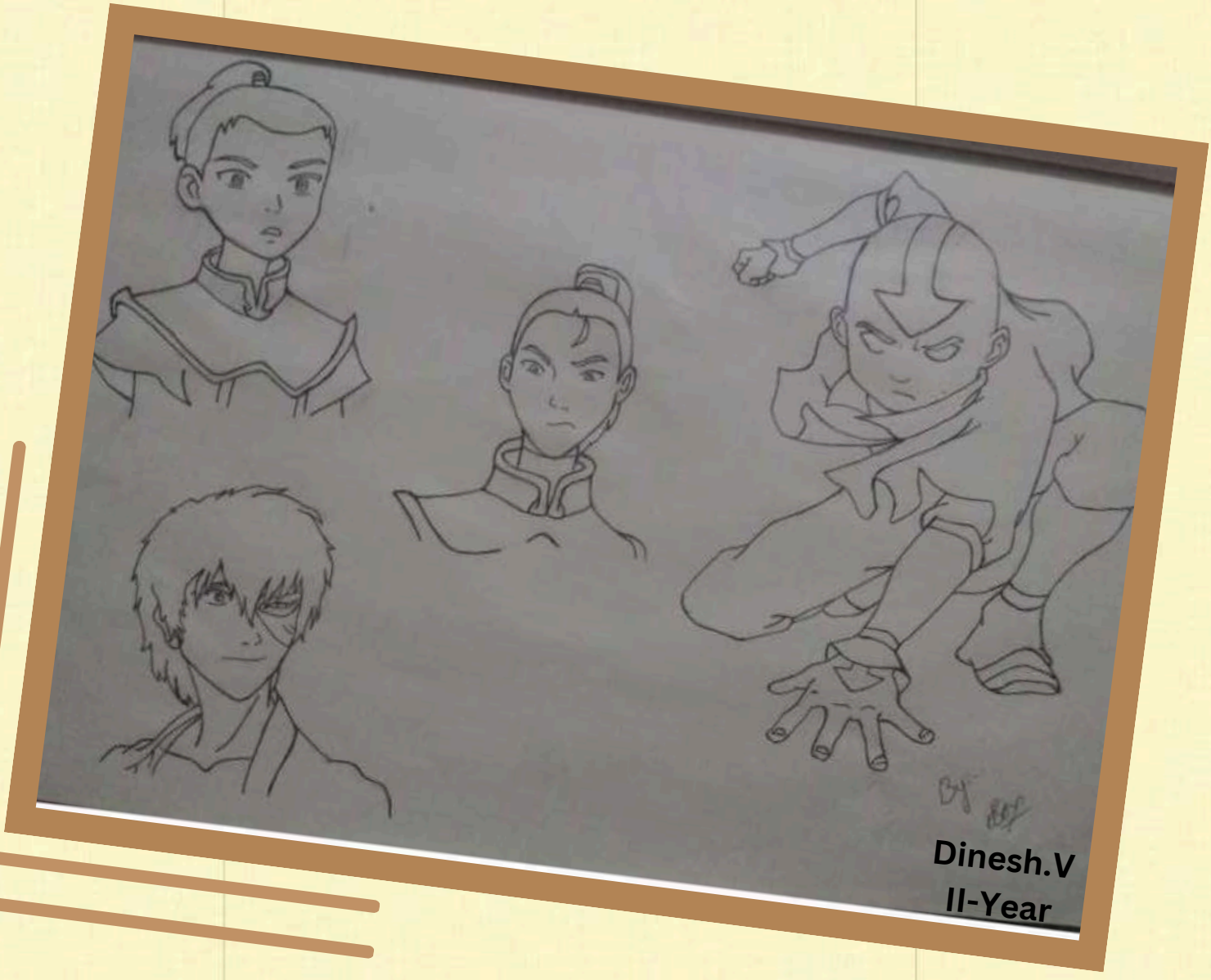


Tamilselvan.M
III-Year



Sasi Kumar.S
IV-Year

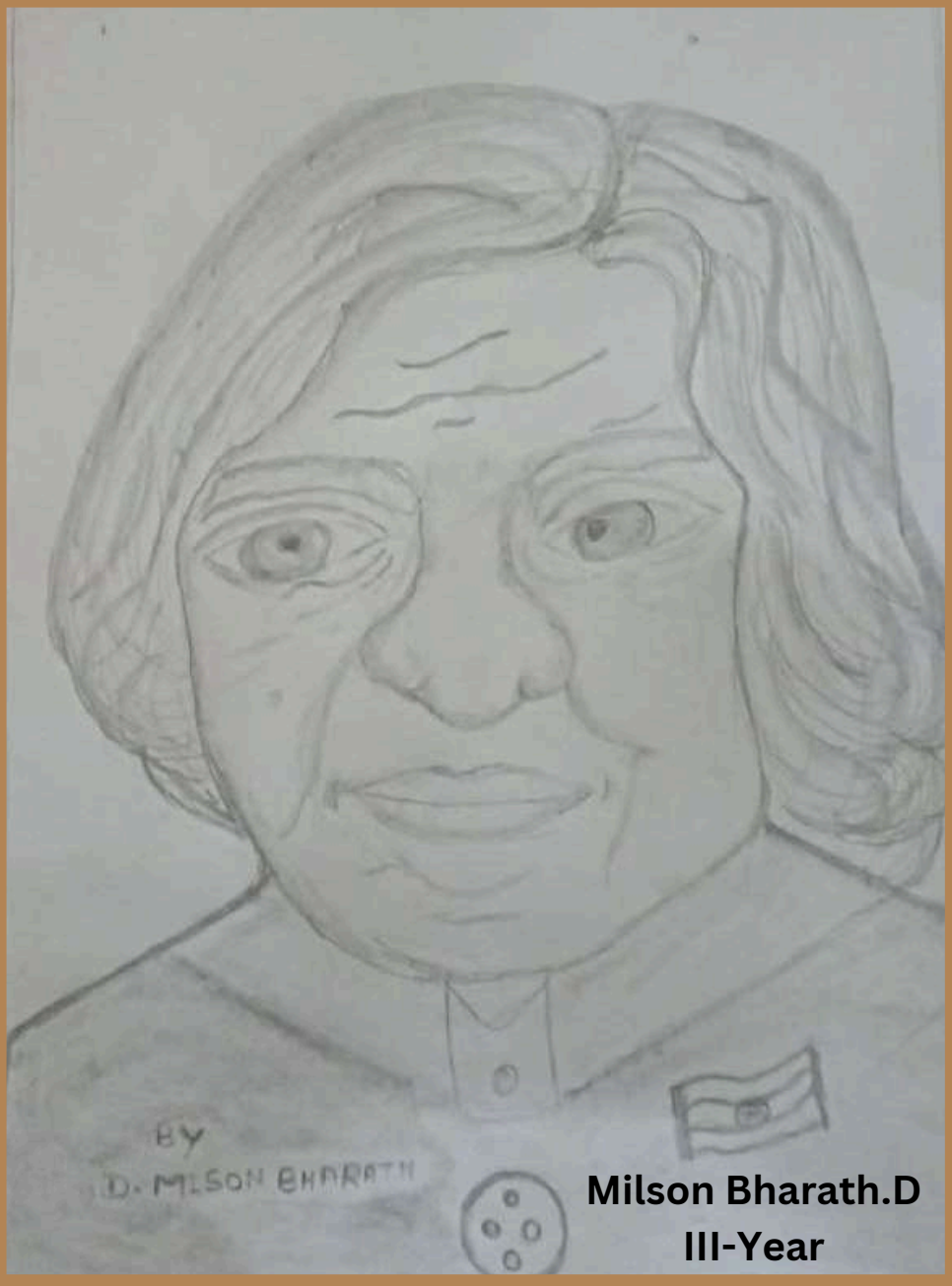
Suganya Devi .M
IV-Year



Dinesh.V
II-Year

Ajith Kumar.E
IV-Year

Asokan.K
III-Year



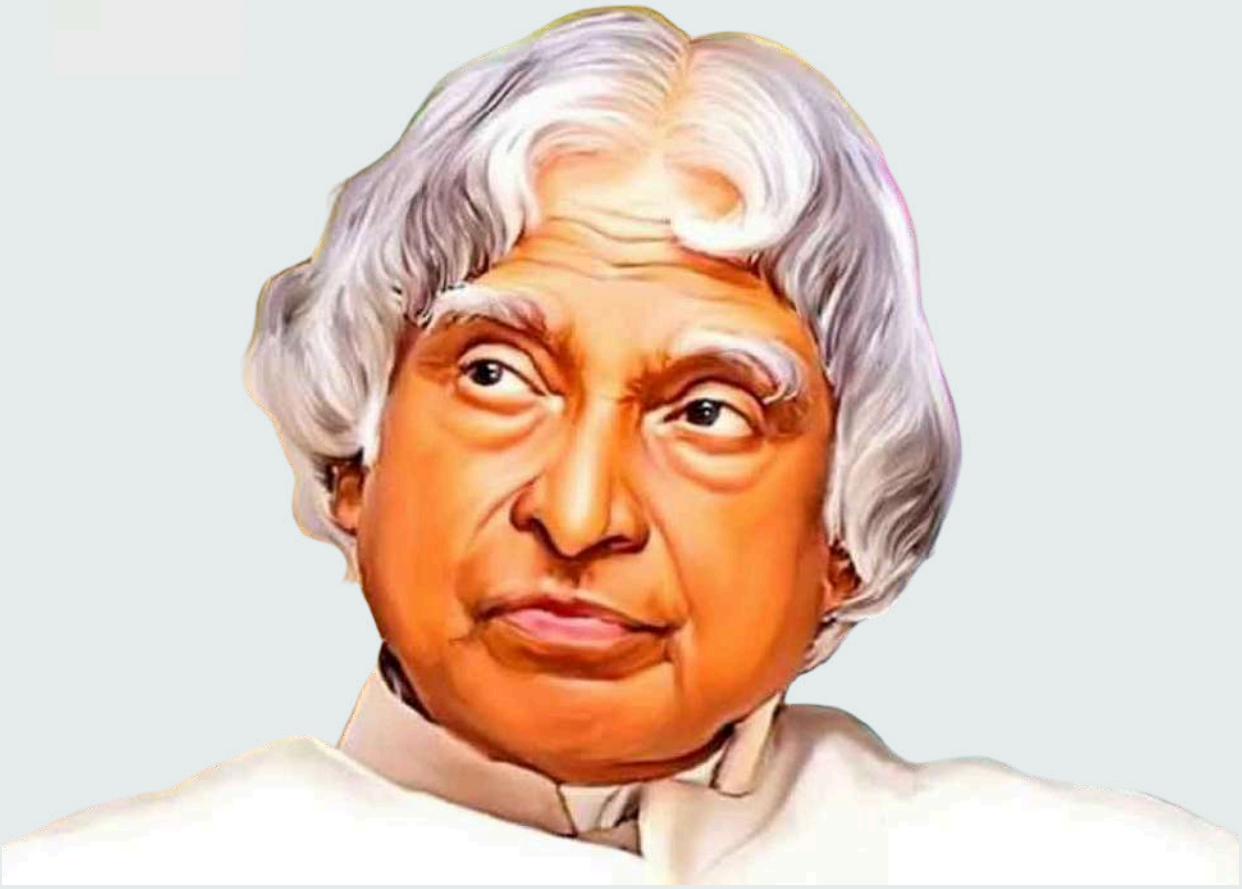
Milson Bharath.D
III-Year

MEMORIES

2018-2022 Batch

2019-2023 Batch

2020-2024 Batch



"AS A YOUNG CITIZEN OF INDIA, ARMED WITH TECHNOLOGY AND LOVE FOR MY NATION, I REALISE, A SMALL AIM IS A CRIME."

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