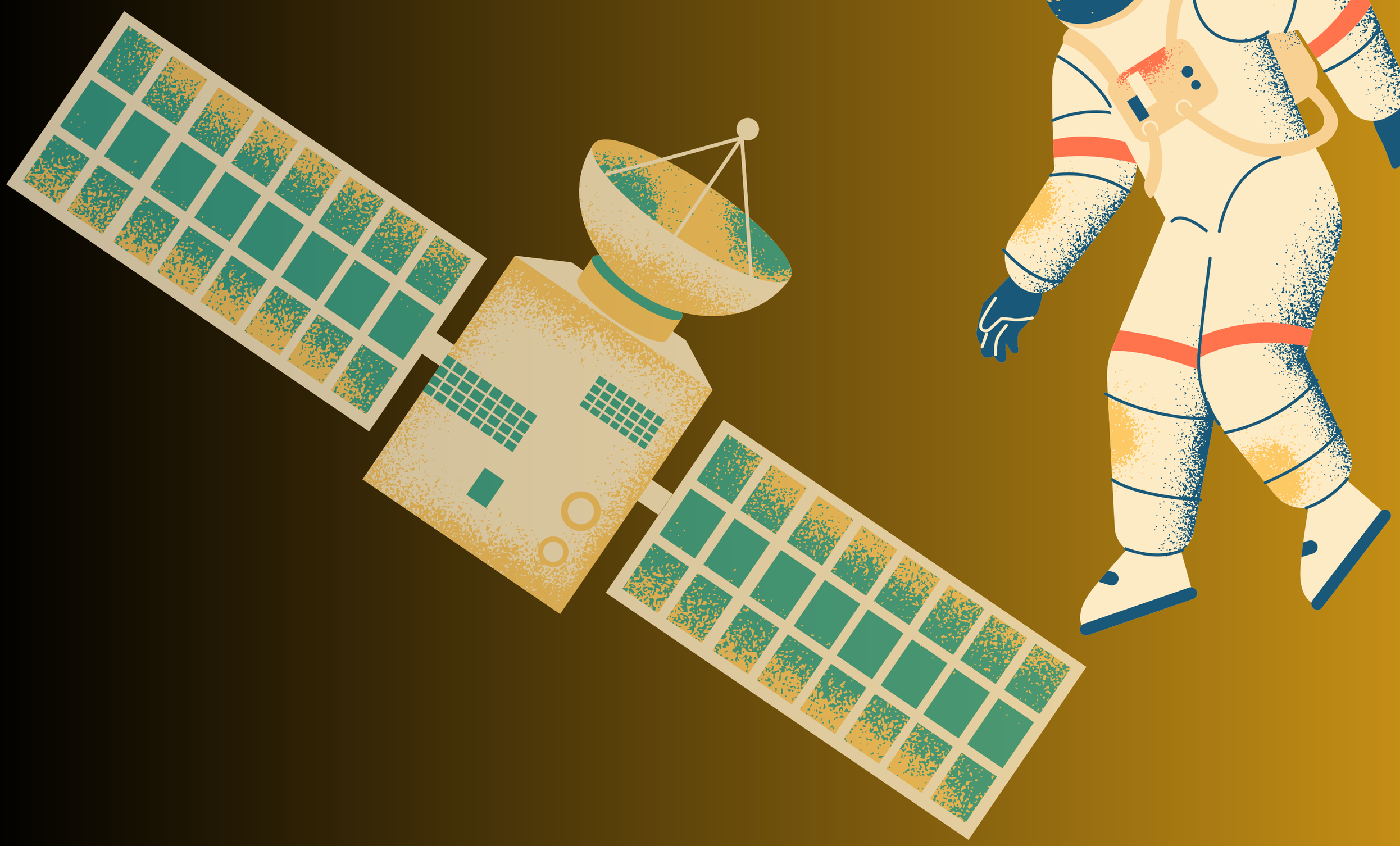
GOVT. POLYTECHNIC ,GAJAPATI

DEPARTMENT
OF
ELECTRONICS & TELECOMMUNICATION ENGINEERING

NAVONMESH-2K25



LEARNING IS NOT CONFINED TO THE CLASSROOM; IT IS A LIFELONG JOURNEY OF GROWTH AND DISCOVERY

PREFACE

"Navonmesh", meaning innovation and new beginnings, is a reflection of the creative and technical potential of the students of the ETC Department. This technical magazine is a dedicated initiative to provide a platform for our students to express their ideas, showcase their projects, and share their understanding of emerging technologies in the field of Electronics and Telecommunication Engineering.

The magazine features a collection of technical articles, project works, and insights into recent advancements, highlighting the practical learning experience gained through the diploma curriculum. It aims to bridge the gap between theoretical concepts and real-world applications while encouraging students to think innovatively and develop problem-solving skills.

We extend our sincere gratitude to all the students, faculty members, and the editorial team of the ETC Department whose constant support and dedicated efforts have made "Navonmesh" a success. Their contributions have truly enriched the quality and vision of this magazine.

We hope that "Navonmesh" inspires every reader to explore new ideas, embrace innovation, and strive for excellence in their technical journey.

ACKNOWLEDGEMENT

We take immense pleasure in bringing out "Navonmesh", the technical magazine of the ETC Department. The successful completion of this magazine would not have been possible without the support and cooperation of many individuals.

We express our sincere gratitude to our respected Principal for providing continuous encouragement and guidance throughout the development of this magazine. We are also thankful to the Head of the ETC Department for their valuable support and motivation in making this initiative a success.

We extend our heartfelt thanks to all the faculty members of the ETC Department for their constant guidance, suggestions, and encouragement. Their support has been instrumental in shaping the quality of this publication.

We would like to acknowledge the dedicated efforts of the editorial team and all the student contributors whose creativity, enthusiasm, and hard work have made "Navonmesh" a meaningful and informative magazine.

Finally, we thank everyone who has directly or indirectly contributed to the successful release of this magazine.

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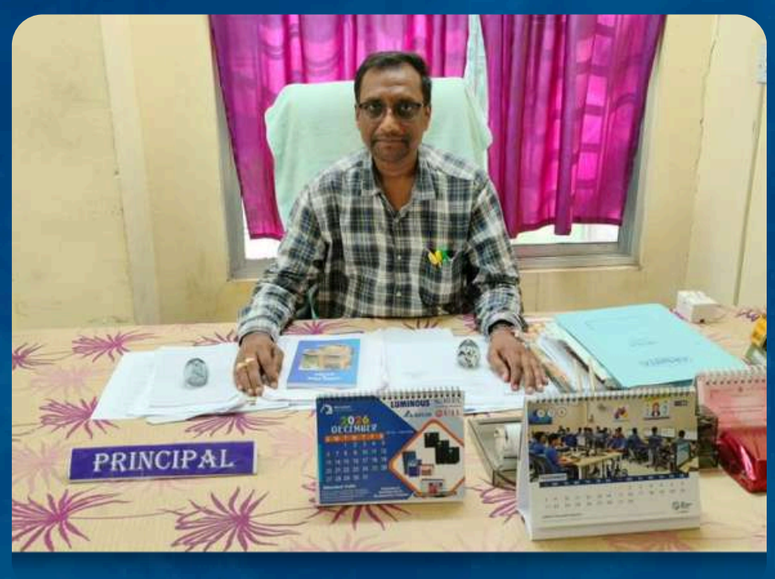
MESSAGE FROM PRINCIPAL



I am delighted to present this edition of our Technical Magazine, which showcases the talent, creativity and innovative spirit of our students. Such initiatives encourage learning beyond classrooms and promote technical excellence.

I appreciate the efforts of all contributors and the editorial team for their dedication. I hope this magazine inspires everyone to explore new ideas and achieve greater height.

Er Anil Kumar Patra
Principal
Govt. Polytechnic,Gajapati

MESSAGE FROM HOD

Dear Students, It gives me great pleasure to welcome all the students of the Electronics and Telecommunication Engg. Dept. . This diploma program provides strong technical knowledge and practical skills required to meet the demands of modern communication and electronic industries.I encourage every student to focus on innovation, discipline, and continuous learning. Maken effective use of laboratory facilities, workshops, emerging technologies to enhance your professional competence. I wish you all success in your academic journey and future career.

Er. Mulli Vanajakshi
HOD(ETC)

EDITORIAL

It gives us immense pleasure to present this edition of our magazine, a reflection of creativity, knowledge, and innovation.

We believe that technical education combined with creativity builds a strong foundation for the future. This edition brings together insights from the world of technology, innovative thoughts, and inspiring perspectives that encourage readers to think, explore and grow.

We sincerely appreciate the efforts of alll contributors, editors and faculty members who have worked tirelessly to make this magazine a success. We hope this edition informs, inspires and ignites new ideas in every reader.

Best Regards,
Dept. of ETC
Govt. Polytechnic,Gajapati

Mr. Tusarkanti Puhan(Lecturer)
Mrs. Manorama Padhy(Lecturer)
Mrs. Soumyasree kalyani Panda(Lecturer)
Mr. Mihira Kanta Panda(Lab. Asst)
Mrs. Ayshwaria Nayak(Sr. Trainer)

L24112003003-SATYABRATA JENA(Student)
F23112003007-DIVYA SABAR(Student)
F23112003001-ABID KHAN(Student)
F23112003019-PRISKILA BHUYAN(Student)

VISSION & MISSON

VISSION:

To be the leading department for imparting excellent technical knowledge and professional competence in the field of Electronics & Telecommunication Engg. to meet the challenges in industry and society.

MISSION:

M1: To deliver ethical and value-based professional education that enables students to acquire advanced technical competency, lifelong learning skills and entrepreneurial abilities.

M2: To build effective leaders by embedding co-curricular and extra-curricular opportunities within departmental and campus activities.

M3:To expose students to emerging technologies and industry practices through seminars, workshops and industry interaction.

PROGRAM OUTCOMES (PO)

- PO1- Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- PO2- Problem analysis: Identify and Analyse well-defined engineering problems using codified standard methods.
- PO3- Design/ development of solutions: Design solutions for well- defined technical problems and assist with the design of systems components or processes to meet specified needs.
- PO4- Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
- PO5- Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.

- PO6- Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities
- PO7- Life-long learning: Ability to analyze individual needs and engage in updating in the context of technological changes.

Program Educational Objectives (PEOs)

PEO-1:

Apply basic knowledge of electronics, communication and mathematics to solve practical engineering problems.

PEO-2:

Work effectively with electronic and telecommunication systems using modern tools and laboratory practices.

PEO-3:

Develop professional skills, ethical values, teamwork, and the ability to learn new technologies for career growth and societal needs.

Program Specific Outcomes (PSOs)

PSO-1:

Students will be able to analyze, design, and troubleshoot electronic circuits and communication systems used in electronics and telecommunication engineering.

PSO-2:

Students will be able to use modern tools, laboratories and emerging technologies such as embedded systems, control systems, signal processing, IoT, and automation for practical engineering applications.

Mrs. Mulli Vanajakshi
HOD(ETC)

She has completed her B.Tech in 2012 from Sarada Institute Of Science Technology and Management,Srikakulam(A.P.) in Electronics & Communication Engg. Discipline and has experience of teaching 11 years in Govt.Polytechnic,Gajapati.

9437815913

vinni12021992@gmail.com

Staff Details

Mrs.Manorama Padhy
Lecturer(ETC)

She has completed her B.Tech in 2014 from CUTM,Paralakhemundi in Electronics & Communication Engineering and MTech in VLSI Design from CUTM,Paralakhemundi and more than 08 years teaching experience.

Mrs. Soumyasree Kalyani Panda
Lecturer(ETC)

She has completed her B.Tech in 2016 from NIST,Berhampur in Electronics & Communication Engineering and MTech in VLSI Design from GIETU,Gunpur and more than 06 years teaching experience and industrial experience 01 years.

Mr. Mihira Kanta Panda
Lab. Asst.(ETC)

He has completed her B.Tech in 2012 from CVRCE,Bhubaneswar in Electronics & Tele-Communication Engineering & more than 11 years teaching experience.

Faculty Achievement

Mrs. Mulli Vanajakshi
HOD(ETC)


MINISTRY OF ELECTRONICS & INFORMATION TECHNOLOGY GOVERNMENT OF INDIA
futureskills prime
CDAC
NIELIT

CERTIFICATE

OF COMPLETION

THIS IS TO CERTIFY THAT

Mulli Vanajakshi

has successfully completed

Government Officer Training - Basic

on

Big Data & Data Science

conducted by C-DAC, NOIDA in association with GP, Gajapati

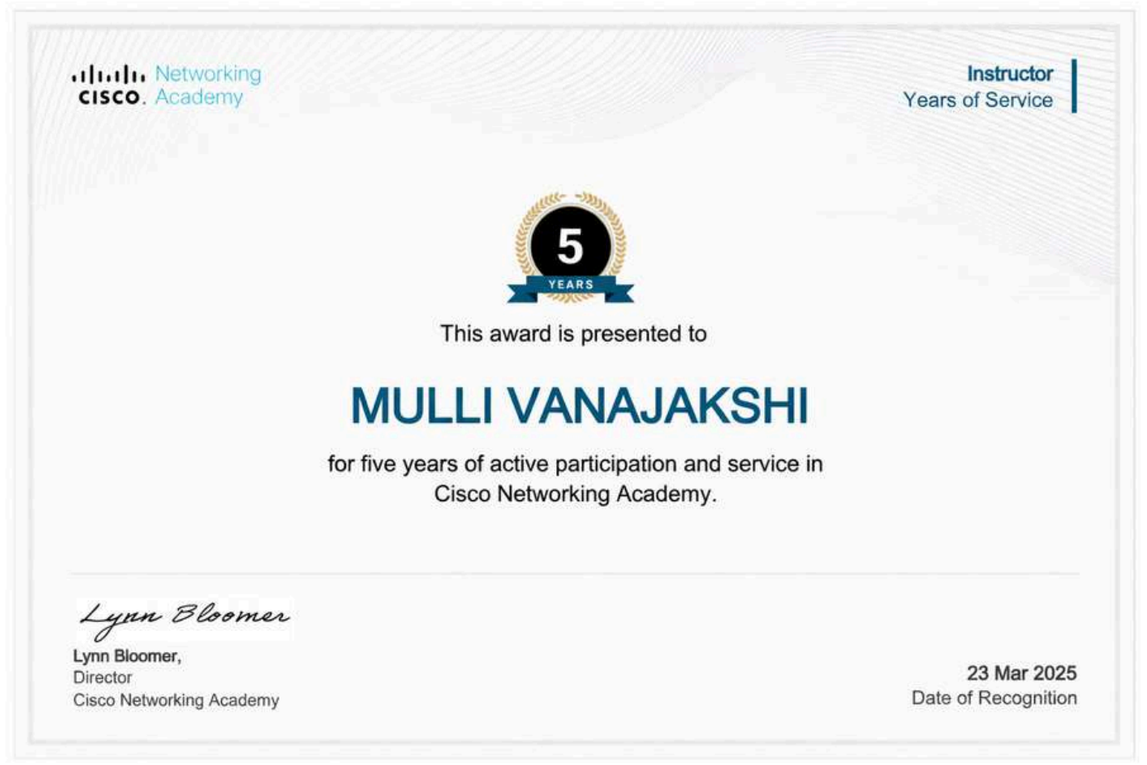
held during 17/12/2024 to 31/12/2024 as part of FutureSkills PRIME Project.

Chief Investigator
Scientist 'F'
C-DAC, NOIDA

Group Co-ordinator
(E&T)
Scientist 'G'
C-DAC, NOIDA

ate of Issue: 23/01/2025

FSP/GOT-B/C-DAC/NOI/G01/2412/1592/331927


Networking Academy

Instructor
Years of Service

5 YEARS

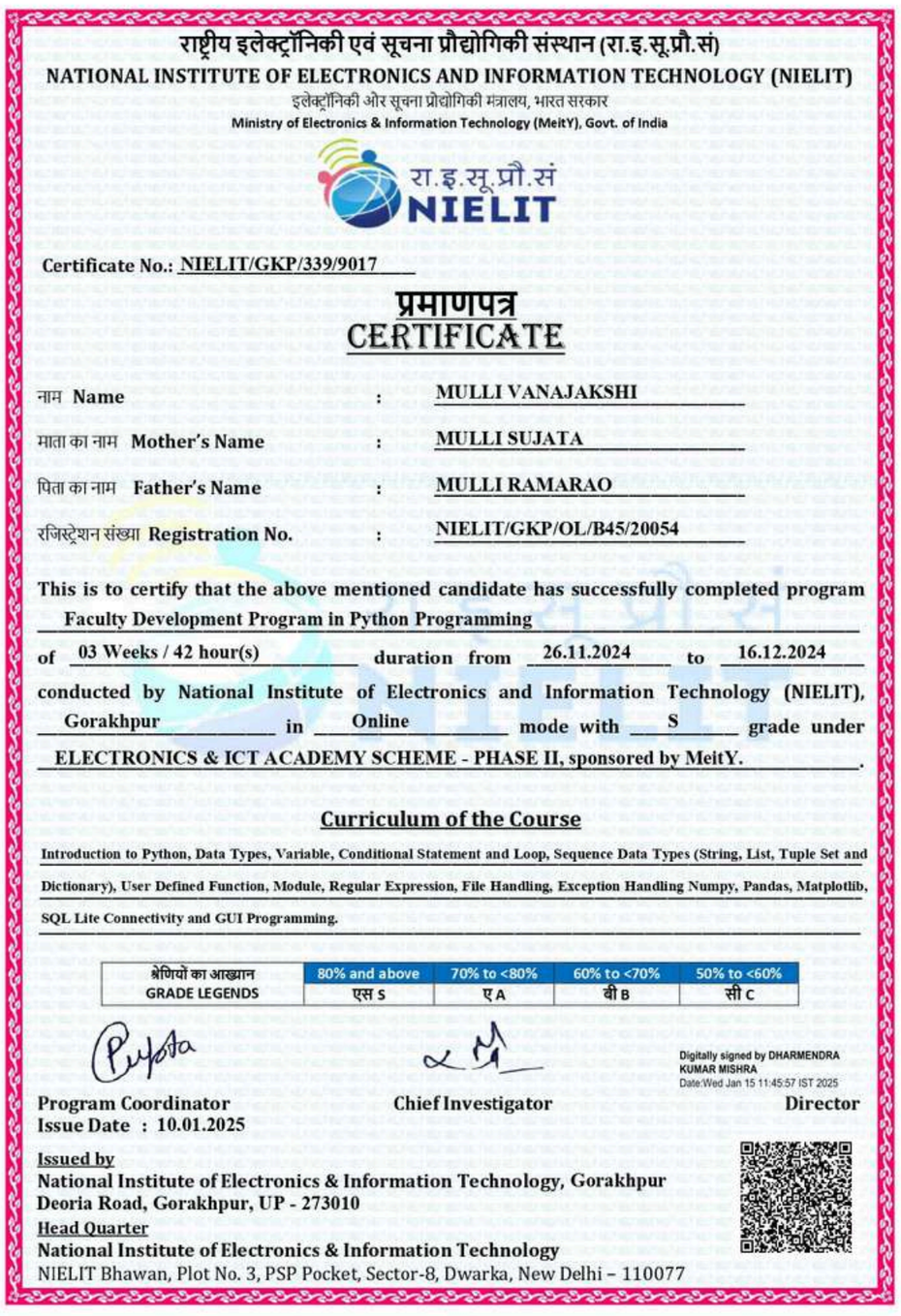
This award is presented to

MULLI VANAJAKSHI

for five years of active participation and service in Cisco Networking Academy.

Lynn Bloomer,
Director
Cisco Networking Academy

23 Mar 2025
Date of Recognition


राष्ट्रीय इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी संस्थान (रा.इ.सू.प्रौ.सं)

NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY (NIELIT)

इलेक्ट्रॉनिकी ओर सूचना प्रोद्योगिकी मंत्रालय, भारत सरकार

Ministry of Electronics & Information Technology (MeitY), Govt. of India

रा.इ.सू.प्रौ.सं NIELIT

Certificate No.: NIELIT/GKP/339/9017

प्रमाणपत्र

CERTIFICATE

नाम Name : MULLI VANAJAKSHI

माता का नाम Mother's Name : MULLI SUJATA

पिता का नाम Father's Name : MULLI RAMARAO

रजिस्ट्रेशन संख्या Registration No. : NIELIT/GKP/OL/B45/20054

This is to certify that the above mentioned candidate has successfully completed program Faculty Development Program in Python Programming of 03 Weeks / 42 hour(s) duration from 26.11.2024 to 16.12.2024 conducted by National Institute of Electronics and Information Technology (NIELIT), Gorakhpur in Online mode with S grade under ELECTRONICS & ICT ACADEMY SCHEME - PHASE II, sponsored by MeitY.

Curriculum of the Course

Introduction to Python, Data Types, Variable, Conditional Statement and Loop, Sequence Data Types (String, List, Tuple Set and Dictionary), User Defined Function, Module, Regular Expression, File Handling, Exception Handling Numpy, Pandas, Matplotlib, SQL Lite Connectivity and GUI Programming.

श्रेणियों का आख्यान GRADE LEGENDS	80% and above	70% to <80%	60% to <70%	50% to <60%
	एस S	ए A	बी B	सी C

Digitally signed by DHARMENDRA KUMAR MISHRA
Date:Wed Jan 15 11:45:57 IST 2025

Program Coordinator
Issue Date : 10.01.2025

Chief Investigator

Director

Issued by
National Institute of Electronics & Information Technology, Gorakhpur
Deoria Road, Gorakhpur, UP - 273010

Head Quarter
National Institute of Electronics & Information Technology
NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi – 110077

Faculty Achievement

Mrs.Manorama Padhy
Lecturer(ETC)

L&T EduTech

COURSE CERTIFICATE

Dec 11, 2025

MANORAMA PADHY

has successfully completed

Electrical Power Generation - An Industrial Outlook

an online non-credit course authorized by L&T EduTech and offered through Coursera

EDUCATION FOR EVERYONE · coursera · COURSE CERTIFICATE

Subject Matter Expert
L&T Edutech

Verify at:
https://coursera.org/verify/8YG9LV03KSAL
Coursera has confirmed the identity of this individual and their participation in the course.

DTU

COURSE CERTIFICATE

Dec 11, 2025

MANORAMA PADHY

has successfully completed

Introduction to solar cells

an online non-credit course authorized by Technical University of Denmark (DTU) and offered through Coursera

EDUCATION FOR EVERYONE · coursera · COURSE CERTIFICATE

Jens Wenzel Andreasen
Professor
Department of Energy Conversion and Storage

Verify at:
https://coursera.org/verify/HN0XROJGPJDB
Coursera has confirmed the identity of this individual and their participation in the course.

IJVDCS

INTERNATIONAL JOURNAL OF VLSI SYSTEM DESIGN AND COMMUNICATION SYSTEMS
(ISSN 2322-0929)

SG: IJVDCSV04IS09P10783-2

Volume No.04, Issue No.09

CERTIFICATE

This is to certify that Prof. /Dr. /Mr. /Ms. *SUSHANT KUMAR MANDAL.* From *Centurion University Technology and Management, Uppalada, Paralakhemundi, Odisha, India.* Participated in the International Journal of VLSI System Design and Communication Systems. Presented a Paper entitled *"Realization of Low Power and High Speed Wide Multiplier Architecture Using D-Latch and Wallace Tree Multiplier."* In the organizing committee of the IJVDCS, at IVDCS, During September-2024.

Hyderabad, INDIA.
30th-September, 2024

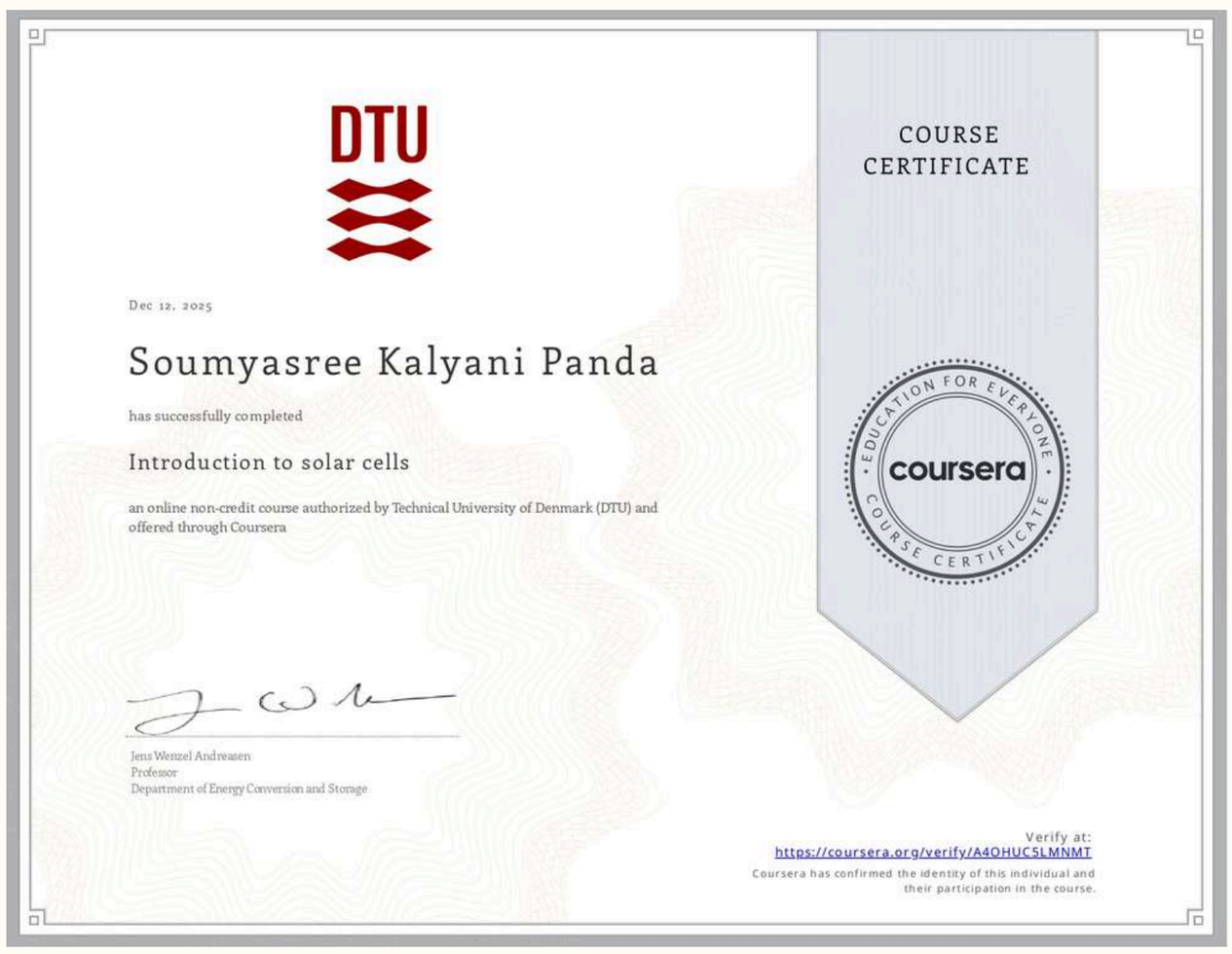
G. Ramesh
Organizing Secretary
SEMAR GROUPS

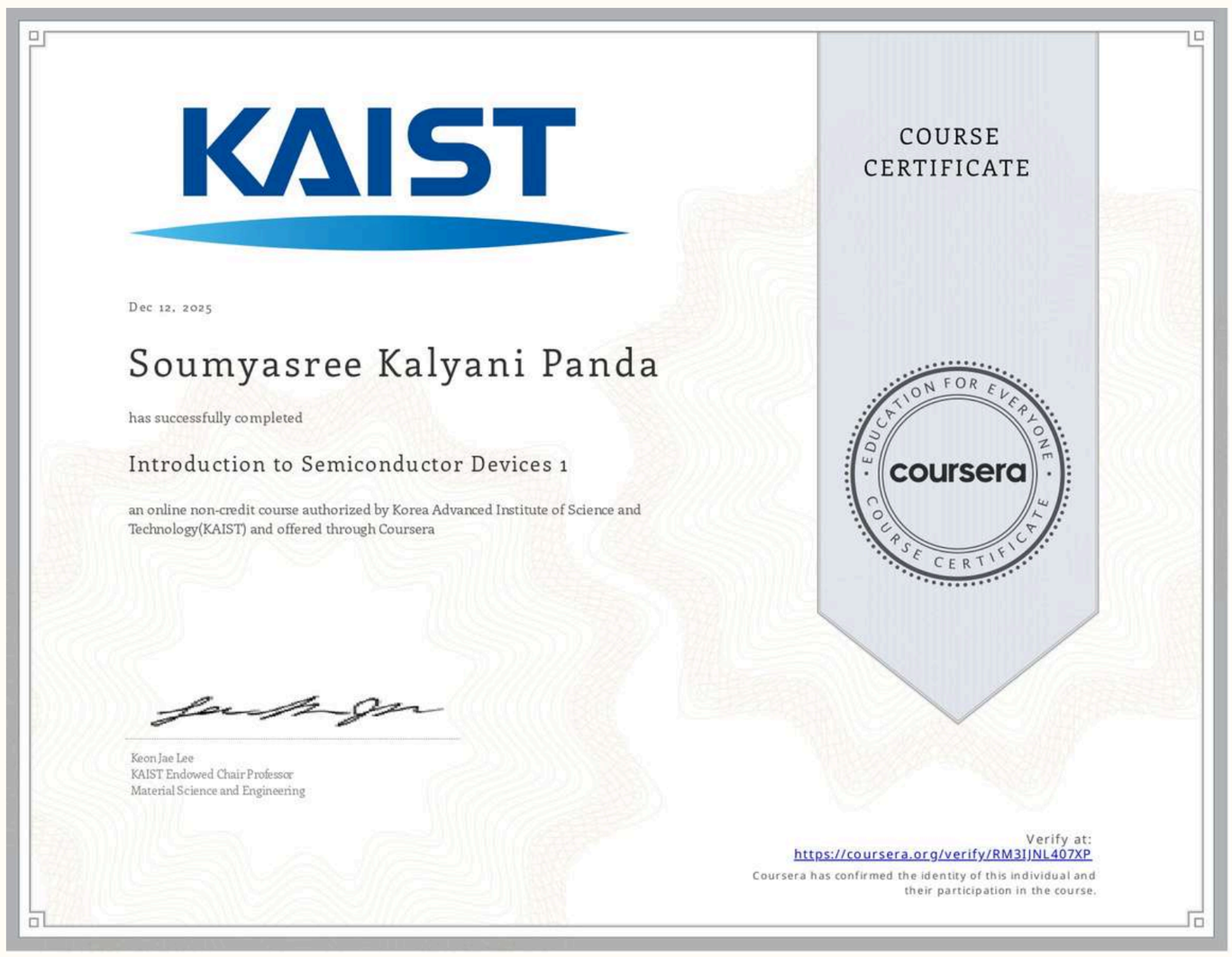
INTERNATIONAL JOURNAL IJVDCS

International Journal of VLSI System Design and Communication Systems, Hyderabad, India.
Web: www.ijvdcs.org, Email: ijournals@ijvdcs.org. Ph: +91-8019015863, +91-9290680694

Faculty Achievement

Mrs. Soumyasree Kalyani Panda
Lecturer(ETC)





Faculty Achievement

Mr. Mihira Kanta Panda
Lab. Asst.(ETC)

MINISTRY OF ELECTRONICS & INFORMATION TECHNOLOGY GOVERNMENT OF INDIA
futureskills prime
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C-DAC, NOIDA

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FSP/GOT-B/C-DAC/NOI/G01/2412/1592/331926

FutureSkills PRIME - A Meity & nasscom Digital Skilling Initiative

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NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY (NIELIT)
इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय, भारत सरकार
Ministry of Electronics & Information Technology (MeitY), Govt. of India

रा.इ.सू.प्रौ.सं NIELIT

Certificate No.: NIELIT/GKP/339/9016

प्रमाणपत्र
CERTIFICATE

नाम **Name** : MIHIRA KANTA PANDA

माता का नाम **Mother's Name** : SOUDAMINI PANDA

पिता का नाम **Father's Name** : DAYANIDHI PANDA

रजिस्ट्रेशन संख्या **Registration No.** : NIELIT/GKP/OL/B45/19691

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NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi – 110077

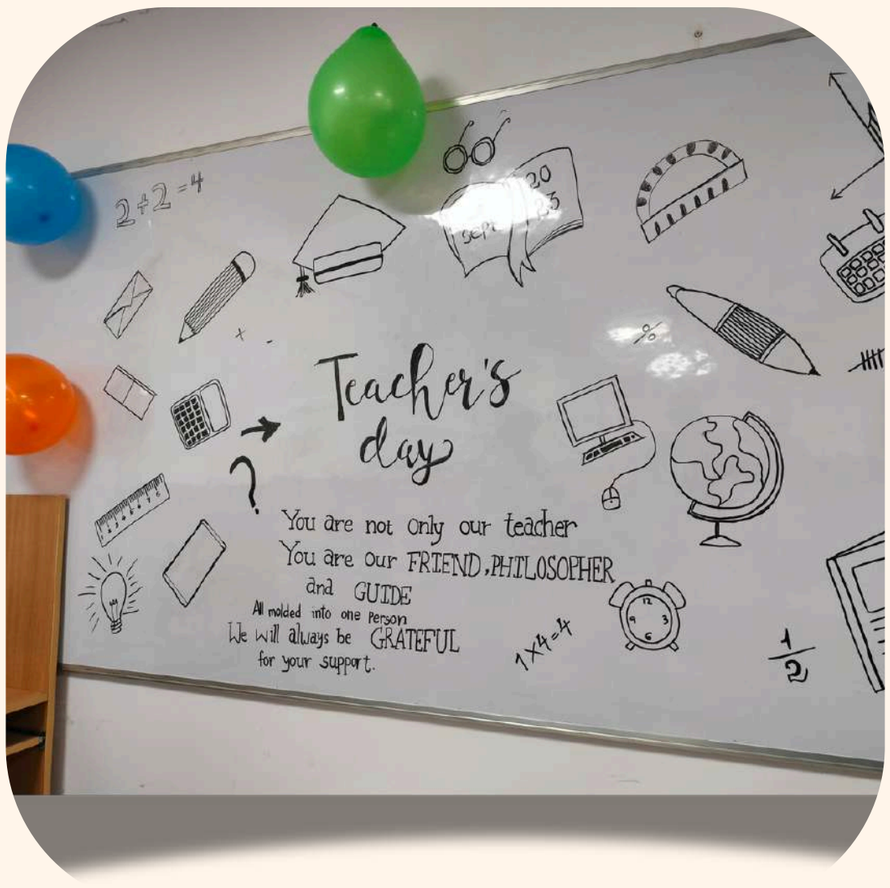
STUDENT ACHIEVEMENTS

SOCIAL ACTIVITY

Special Day Celebration

Utkal Divas

Freshers Day



Teachers Day

Viswakarma Puja

Student Project Program

STUDENT'S FOLIO

DRONE WITH CAMERA

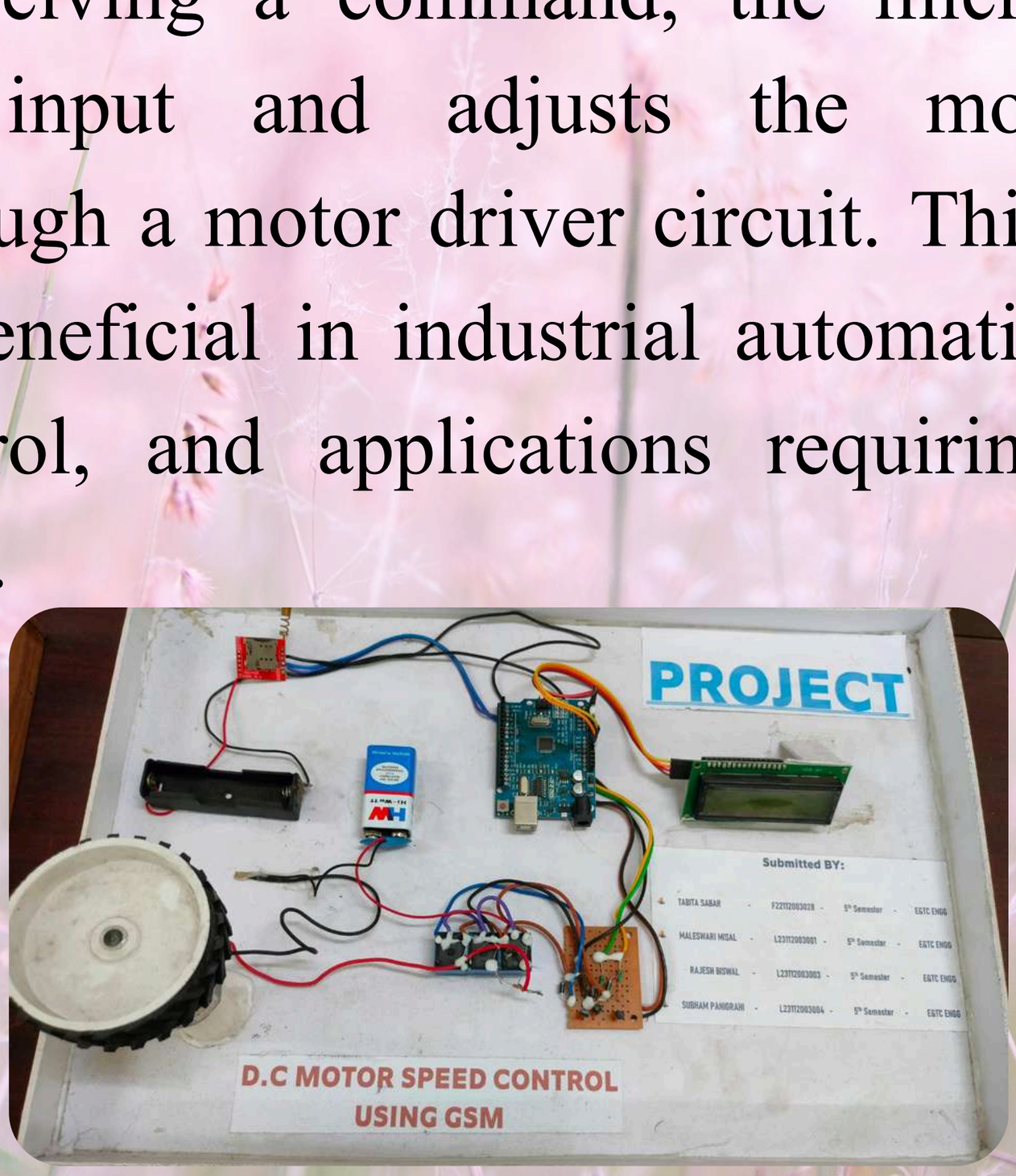
This project report presents the design, development, and analysis of a drone system equipped with a high-resolution camera, aimed at exploring its technical capabilities and real-Vehicle (UAV) technology, drones have evolved from military-grade tools to indispensable world applications across various sectors. With the rapid advancement of Unmanned Aerial assets in civilian domains such as agriculture, surveillance, filmmaking, disaster response, and infrastructure inspection.

This project not only showcases the potential of drone-camera systems in solving modern-day problems but also contributes to ongoing technological advancements, promoting innovation in robotics, automation, and intelligent surveillance systems.

DC MOTOR SPEED CONTROL USING GSM

The project "DC Motor Speed Control Using GSM" aims to develop a remote control system for regulating the speed of a DC motor using GSM (Global System for Mobile Communication) technology. The primary objective is to facilitate real-time, wireless speed adjustment, eliminating the need for manual intervention and enabling control from any location within GSM network coverage.

The system utilizes a GSM module interfaced with a microcontroller to receive speed control commands via SMS. Upon receiving a command, the microcontroller processes the input and adjusts the motor speed accordingly through a motor driver circuit. This approach is particularly beneficial in industrial automation, remote machinery control, and applications requiring variable speed operations.

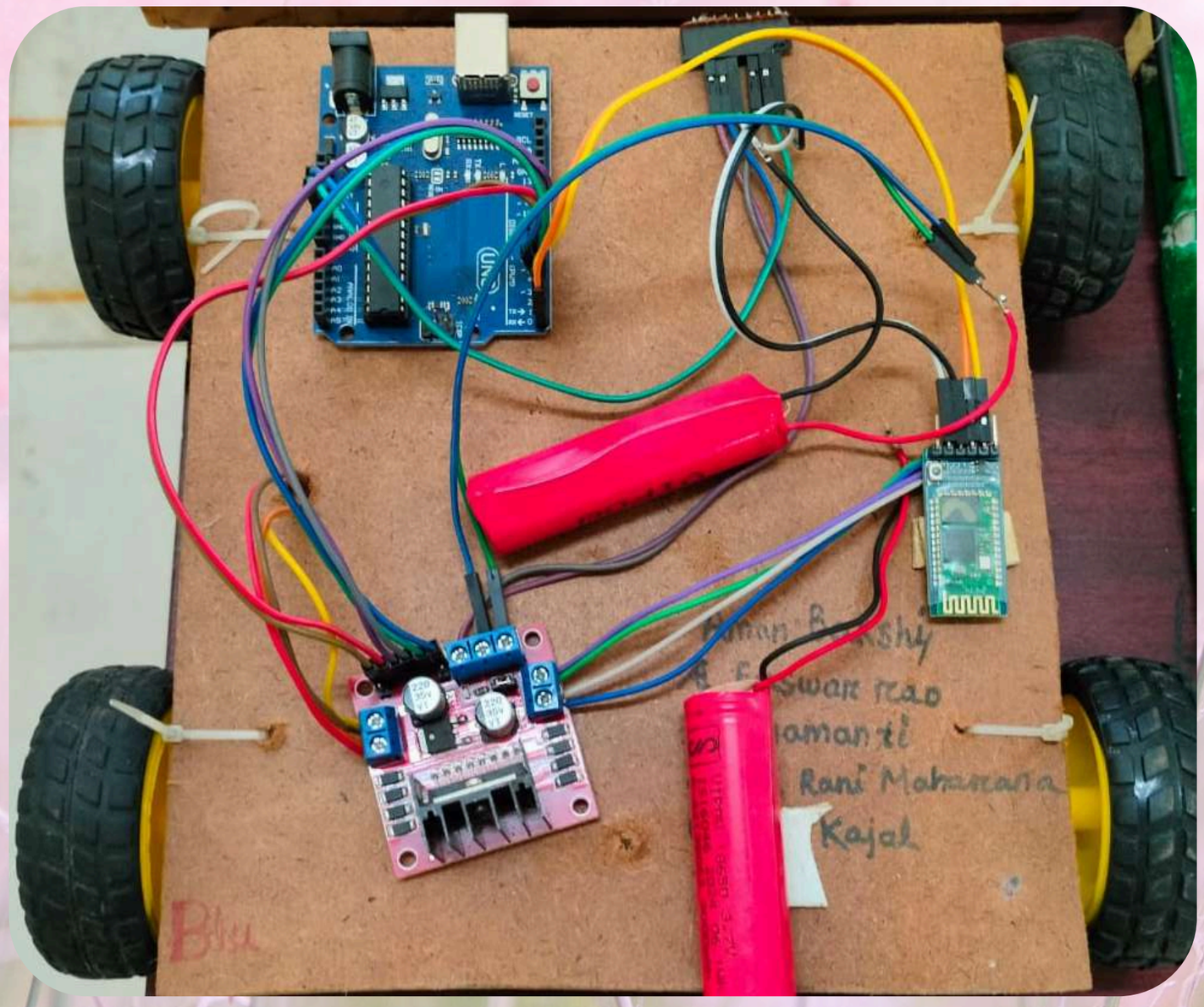


BLUETOOTH CONTROLLER ROBOTIC CAR

This project focuses Executive Summary on the design and development of a Bluetooth-controlled robotic car, aimed at providing a cost-effective and efficient solution for remote-controlled vehicle systems.

The robotic car is operated via a smartphone or Bluetooth-enabled device, allowing wireless communication through a Bluetooth module (e.g., HC-05) interfaced with a microcontroller (such as Arduino Uno).

The vehicle responds to directional commands-forward, backward, left, and right-based on input from a custom-built mobile application or a terminal app.

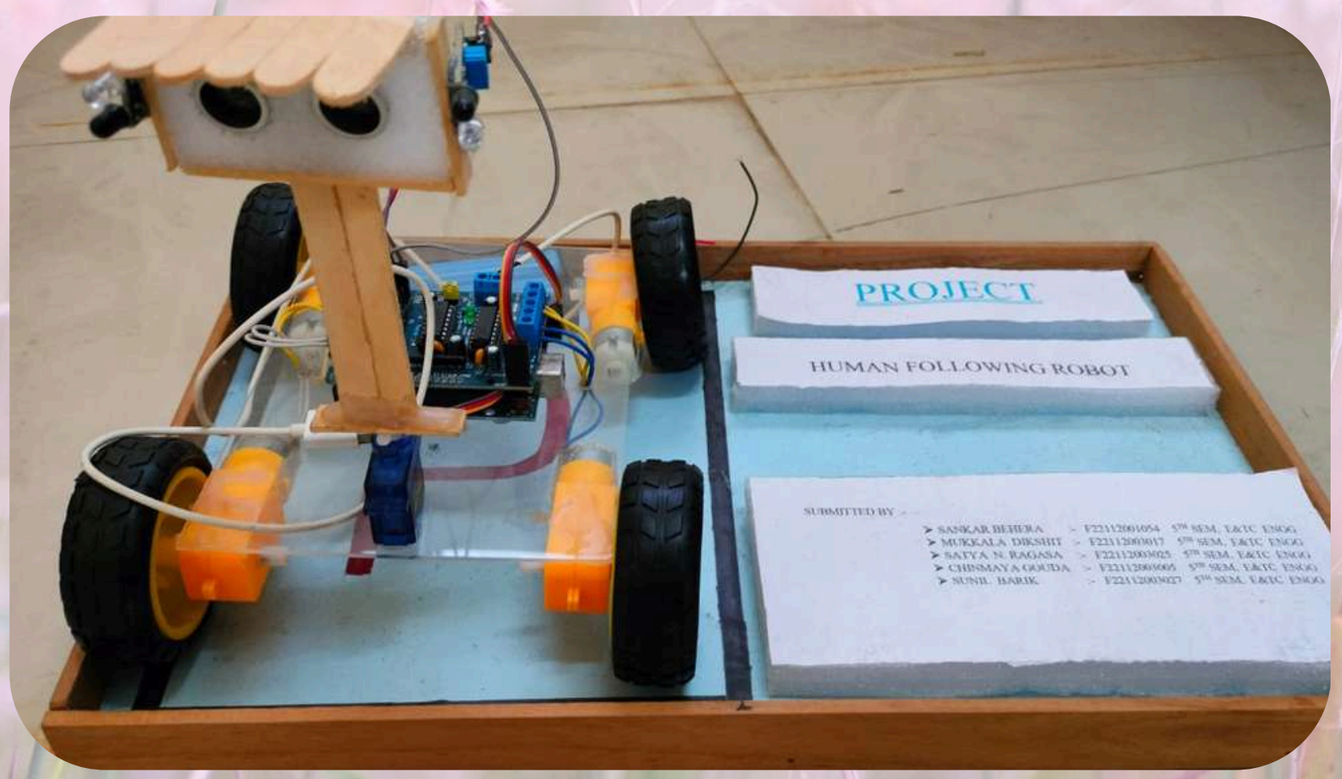


HUMAN FOLLOWING ROBOT

Over the last few years, robotic technology has evolved significantly that innovations were merely a utopian dream for some. The automation becomes first priority to any kind of works which gives the birth to robot. Robot is a programmable, automation device that replace human intervention from basic daily activities to activities that people think it cannot be alternated like consultant or any field related to art.

There are plenty of robots can assist multiple aspects of human life. Among those machine assistant, a robot that can detect and follow humans or obstacles within a certain range is known as a 'Human Following Robot'.

Human following Robot can co-exist and enhance the life quality of people. This robot presents as a carrier which deliveries items or packages in daily life in several places such as restaurant, hospital, shopping mall..



Lab activity

TECHNICAL EXCURSION

Topper's Corner-2024-25

NAME OF THE STUDENT	SEMESTER	MARK IN%	POSITION
UDAYANANDA SAHU	6TH	90.53%	1th
SANKAR BEHERA		80.53%	2nd
MUKKAL DIKSHIT		77.60%	3rd
UDAYANANDA SAHU	5th	81.10%	1th
DEBABRTA MOHANTY		74.00%	2nd
MUKKAL DIKSHIT		68.93%	3rd
CHINMAYEE CHOUDHURY	4th	74.93%	1th
ABID KHAN		70.40%	2nd
SATYABRATA JENA		70.26%	3rd
SATYABRATA JENA	3rd	73.60%	1th
CHINMAYEE CHOUDHURY		64.13%	2nd
POLAKI SANKAR YAD		66.13%	3rd

Placements

In this academic year, our Final Year ETC students have successfully secured placements in reputed companies across various domains. The consistent placement performance showcases the department's commitment to excellence in education and skill development.

NAME OF THE STUDENTS	COMPANY NAME
SANKAR BEHERA	Rakon India Pvt. Ltd
SANTOSH PATRA	Webasto Roof Systems India Pvt. Ltd .
DEBABRTA MOHANTY	TATA Electronics System And Solutions
GEDILA LAXMAN	KIA India Pvt. Ltd.
MANIKANTHA SIMALU	KIA India Pvt. Ltd.
SATYA NARAYANA RAGASA	John Deere India Pvt. Ltd.
TABITA SABAR	John Deere India Pvt. Ltd.
RAJESH BISWAL	Webasto Roof Systems India Pvt. Ltd .

Annual Report of ETC Department (2024–2025)

The Department of Electronics & Telecommunication Engineering (ETC) at Government Polytechnic Gajapati successfully completed the academic year 2024–2025 with notable achievements in academics, placements, and technical activities. Students secured distinctions and top ranks, including the institute first rank from the department.

Many students were placed in reputed core and IT companies through effective training programs. The department organized workshops, seminars, and project exhibitions on emerging technologies like IoT and embedded systems. Industrial visits and expert lectures enhanced practical exposure. Additionally, one student achieved recognition at the state-level sports, reflecting excellence in both academics and extracurricular activities.

Message to Readers

As we reach the final page of this edition, we hope this technical magazine has sparked curiosity, deepened your understanding and inspired innovation. In a world driven by rapid technological advancements, staying informed and adaptable is not just an option it is a necessity.

This magazine is a small step toward bridging knowledge and application, encouraging students and professionals alike to explore, experiment, and excel in their respective domains. Every concept learned today becomes the foundation for tomorrow's breakthroughs.

We extend our sincere gratitude to all contributors, faculty, and readers who made this publication possible. Your enthusiasm and support continue to drive us forward.

Let us continue to learn, innovate, and build a better technological future together.

Stay curious. Stay innovative.

Sweet Memories

Thank You