

# TECH-FLY

2024

Even sem





## **Vision of the Institute**

To emerge as a learning Center of Excellence in the National Ethos in Diploma in Engineering.

## **Mission of the Institute**

M1: To elevate the standards of students through ethical practices.

M2: To provide facilities and services to meet the challenges of Industry and Community.

M3: To ascertain holistic development of the students and staff members by inculcating knowledge and profession as work practices.

## **Vision of the Department**

To emerge as a learning Center of Excellence in the domain of Computer Science and Engineering to produce proficient diploma engineers.

## **Mission of the Department**

M1: To impart quality technical education in the field of Computer Science & Engineering and develop the skill through modern teaching & learning method.

M2: To provide learning environmental to face societal and industrial challenges of Computer Science & Engineering.

M3: To ensure overall development of students and staff members by inculcating knowledge and professional ethics as a part of lifelong learning.

# About TGPCET

Tulsiramji Gaikwad-Patil College of Engineering and Technology (TGPCET) Polytechnic was established in the year 2013 by Vidarbha Bahu-Uddeshiya Shikshan Sanstha (VBSS), a registered society. It is a self-financed Private Polytechnic, which is affiliated to Maharashtra State Board of Technical Education (MSBTE) Mumbai and is approved by All India Council for Technical Education, New Delhi. Also, the college is approved by Directorate of Technical Education (DTE), Mumbai, Maharashtra State.

# About Department

The Department of Computer Science and Technology at Tulsiramji Gaikwad Patil College of Engineering and Technology offers two specialized branches: Computer Science and Information Technology. With modern labs, experienced faculty, and an industry-focused curriculum, the department ensures strong technical foundations. It promotes practical learning through projects, workshops, and coding events. Students gain exposure to emerging fields like AI, Cybersecurity, and Data Science, preparing them for successful careers in tech.

# HOD's Desk



## **Priyanka Choudhary**

**HOD, CW, Polytechnic**

Welcome to the vibrant and dynamic Department of Computer Science & Engineering at TGPCET Polytechnic, Nagpur! In an era where technology evolves at an unprecedented pace, our department takes pride in nurturing the next generation of innovative minds in the realm of computing. We are committed to providing a robust academic foundation combined with practical exposure, enabling our students to thrive in the ever-changing tech landscape. At TGPCET Polytechnic, our distinguished faculty members bring a wealth of industry experience and academic expertise to the class room. We believe in cultivating an environment that encourages curiosity, critical thinking, and creativity among our students. Our focus extends beyond traditional learning methods, emphasizing hands-on experiences through state-of-the-art laboratories and collaborative projects. We aim not only to impart technical knowledge but also to instill ethical values and a sense of responsibility in our students, empowering them to become socially conscious professionals. Our department is dedicated to fostering an inclusive community where diversity is celebrated, ideas are exchanged freely, and each individual's potential is recognized and nurtured. We encourage our students to engage in extracurricular activities, research endeavors, and industry collaborations to broaden their horizons and prepare for the challenges of tomorrow. As the Head of Department, I invite you to explore the multitude of opportunities available within our department. Whether you aspire to develop ground breaking software, delve into cybersecurity, explore artificial intelligence, or innovate in any other computing domain, TGPCET Polytechnic is the ideal platform to embark on your journey towards success. I extend my best wishes to all our students and encourage them to dream big, strive for excellence, and make a meaningful impact in the world of Computer Science & Engineering

# PEO's, PSO's & PO's

## Programs Educational Objectives:

**PEO 1.** Provide socially responsible, environment friendly solutions to Computer engineering related broad-based problems adapting professional ethics.

**PEO 2.** Adapt state-of-the-art Computer engineering board-based technologies to work in multi-disciplinary work environments.

**PEO 3.** Solve broad-based problems individually and as a team member communicating effectively in the world of work

## Programs Specific Outcomes:

### **PSO 1. Computer Software and Hardware Usage:**

Use state-of-art technologies for operation and application of computer software and hardware.

### **PSO 2. Computer Engineering Maintenance:**

Maintain computer engineering related software and hardware system.

# Programs Outcomes (PO's):

## **1. Basic and Discipline specific knowledge:**

Apply knowledge of basic mathematic science and engineering fundamentals and engineering specialization to solve the engineering problems.

## **2. Problem analysis:**

Identify and analyze well-defined engineering problems using codified standard methods.

## **3. Design/ development of solutions:**

Design solutions for well-defined technical problems and assist with the design of system components or processes to met specified method.

## **4. Engineering Tools, Experimentation and Testing:**

Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

## **5. Engineering Practices for society, sustainability and environment:**

Apply appropriate technology in context of society, sutainability, environment and ethical practices.

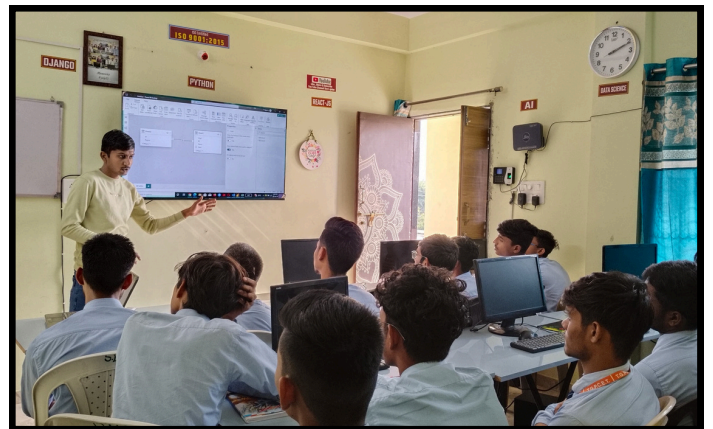
## **6. Project Management:**

Use engineering managements principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

## **7. Life-long learning:**

Ability to analyze individual needs and engage in updating in the context of technological changes.

# Industrial Visit



Department of **Computer Science & Engineering** have organized an industrial visit at “SSIT PVT LTD, Nagpur”.

**Aim:** To gain industry insights, technical knowledge, and explore career opportunities.

Department of Computer Science & Engineering of Tulsiramji GaiKWad Patil College of Engineering & Technology, Polytechnic, Nagpur student visited “SSIT PVT LTD, Nagpur”. The Director of Anishree Technology shared valuable insights into industry trends, applications, and best practices.



# Industrial Visit



Department of **Computer Science & Engineering** have organized an industrial visit at “Yalamanchili Pvt Ltd, Nagpur”

**Aim:** To Understanding the company’s innovative solutions and technologies through interactive sessions and demonstrations

Department of Computer Science & Engineering of Tulsiramji Gaikwad Patil College of Engineering & Technology, Polytechnic, Nagpur student visited “Yalamanchili Pvt Ltd, Nagpur”.

# Industrial Visit



Department of **Computer Science & Engineering** have organized an industrial visit at “Anishree Technology, Nagpur”.

**Aim:** To provided valuable learning opportunities, enhancing technical skills and knowledge in a practical setting.

Department of Computer Science & Engineering of Tulsiramji Gaiwad Patil College of Engineering & Technology, Polytechnic, Nagpur student visited “Anishree Technology, Nagpur”. The Director of Anishree Technology shared valuable insights into industry trends, applications, and best practices.

# Guest Lecture



**Department of Computer Science & Engineering** under ISTE and IE(I) student chapter have organized Expert Lecture on topic " Networking Skills" by Mr. Bhavsagar Meshram, Director, Bhavyansh IT Solution, Nagpur

**Aim:** To understand the participants with essential networking skills that are crucial for personal, academic, and professional growth. The session will focus on building effective communication, relationship-building strategies

**MR. Bhavsagar Meshram** Sir explained in this session about his knowledge about how Networking Skills, To Develop Core Communication Abilities Enhance participants' verbal and non-verbal communication skills essential for effective professional networking. introduction to Networking understanding networking and its importance in career development. Building a Personal Brand How to create a strong and memorable professional identity.

# Guest Lecture

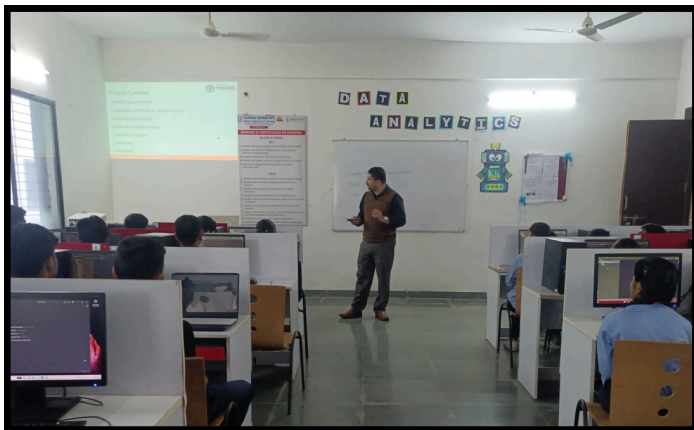


## Guest Lecture on Entrepreneurship Awareness at TGPCET

The **CSE Department of TGPCET** organized a guest lecture on “Awareness of Entrepreneurship Development in Different Sectors.” The session aimed to inspire students to explore startup opportunities and understand the entrepreneurial ecosystem.

The expert speaker shared insights on government schemes, funding options, and innovation across sectors. Students actively participated and gained practical knowledge about building a successful venture.

# Technical Workshop



Department of **Computer Science & Engineering** under ISTE and IE(I) student chapter have organized Expert Lecture on topic " Python Programming" by Mr. Anup Kelkar, Director, Kelkar's Python Academy, Nagpur

**Aim:** To introduce students to Python programming, a versatile and powerful language used across various domains such as web development, data science, machine learning, and automation. The lecture will cover fundamental programming concepts, Python syntax, and best practices, enabling participants to build efficient and scalable applications

**MR. ANUP KELKAR** Sir explained, The lecture covered several advanced topics in Python, with a focus on clean coding, performance optimization, and real-world application development. Data types, control structures, functions, and error handling Python libraries and frameworks (e.g., Pandas, Flask, NumPy). Use cases in web development, data analysis, and automation. Writing clean, maintainable code using PEP8 standards. Career paths and upskilling opportunities in Python.

# Technical Workshop



**Department of Computer Science & Engineering** under ISTE and IE(I) student chapter have organized Expert Lecture on topic "Mobile Application Development" by Mr. Nakul Deshmukh, Director, Ibase Technology, Amravati.

**Aim:** To provide students with a comprehensive understanding of modern mobile application development, including current technologies, development methodologies, platform choices, industry trends, and real-world challenges, in order to equip students and professionals.

**MR. NAKUL DESHMUKH** Sir explained in this session about his knowledge about how Mobile Application Development, a subset of artificial intelligence, focuses on enabling systems to learn from data and improve their performance without being explicitly programmed. Application Development, on the other hand, deals with processing, analyzing, and visualizing data to derive actionable insights. Together, they form the backbone of intelligent decision-making in domains like finance, e-commerce, education, and beyond.

# Students Achievements



**TGPCET Boys won 1st prize in Football in Shegaon**



**TGPCET Polytechnic Girls students won the Inter Engineering Diploma Students Sports Association's (IEDSSA) Volleyball tournament of I Zone**

# Students Achievements



**TGPCET Boys won 1st prize by volleyball team in shegaon**



**TGPCET Polytechnic Boys Team runner up in the Inter Engineering Diploma Students Sports Association's (IEDSSA) Kabaddi tournament of I Zone**



# Faculty Achievements



## TGPCET Faculty Honoured for Best Performance

A proud moment for Tulsiramji GaiKWAD-PATIL College of Engineering and Technology (TGPCET) as a faculty member was felicitated for Best Performance during a special event organized on campus. The felicitation took place in the presence of institute dignitaries and fellow staff, recognizing dedication, excellence in teaching, and contribution to student development.

Held at the college's seminar hall, the ceremony reflected TGPCET's continued commitment to acknowledging and motivating academic excellence among its faculty members.

# Outstanding Performance



## Outstanding Performance in State Level Paper Presentation

We are proud to announce the remarkable achievement of our students from the Department of Computer Science and Engineering (Polytechnic), Tulsiramji Gaikwad Patil College of Engineering and Technology, who showcased their technical excellence and innovation at the State Level Paper Presentation Competition.

We extend our heartfelt congratulations to the students and their mentors for this significant accomplishment and wish them continued success in future endeavors.

# Student Placement



**Prajwal Ramteke(CSE)**



**Prajwal Ramteke(CSE)**



**Prajwal Ramteke(CSE)**



The Department of **Computer Science and Engineering** proudly congratulates the following students for their successful placement in reputed organizations:

**Prajwal Ramteke** has been placed at Sanspareils Greenlands Retail Pvt. Ltd.

**Tanushree Gaikwad** has secured a position at Kid Mentor Global School.

**Pratha Khandaremesh** has been successfully placed in Aditya Birla Fashion and Retail Limited.

The department commends their dedication and hard work and extends best wishes for a bright and successful career ahead.

# Faculty Publication

*Vidyabharati International Interdisciplinary Research Journal 18(1) Mar. 2024 - May. 2024*

*ISSN 2319-4979*

## **ROBOTIC FLOOR CLEANER "SWEEPEAZE: YOUR ROBOTIC FLOOR MAESTRO"**

**Prof. Sneha R Bhangre**

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**Mr . Amit Chhotelal Bisane**

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**Prof. Heena B Kachhela**

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**Ms . Rutuja Pandurang Sahare**

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**Mr . Vivek Netaram Pushptode**

*Tulsiramji Gaikwad Patil College of Engineering and Technology, Polytechnic*

## **Paper Publication Achievement**

We are proud to announce that Prof. Heena B Kachehla from the Department of Computer Science and Engineering (Polytechnic), Tulsiramji Gaikwad Patil College of Engineering and Technology, has successfully published a research paper titled: "**Robotic Floor Cleaner – SWEEPEAZE: Your Robotic Floor Maestro**"

in the esteemed journal Vidyabharati International Interdisciplinary Research Journal (Volume 18, Issue 1, Mar-May 2024, ISSN 2319-4979).

We extend our heartiest congratulations to **Prof. Heena B Kachehla** and the entire research team for this remarkable contribution to the field of smart home automation and robotics.

# Faculty Publication

*Vidyabharati International Interdisciplinary Research Journal 18(1) Mar.2024 - May.2024*

ISSN 2319-4979

## **IOT- BASED BOMB DEFUSING ROBOT**

**Prof . Heena Kachhela**

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**Mr. Viraj Wankhade**

## **Research Paper Publication Achievement**

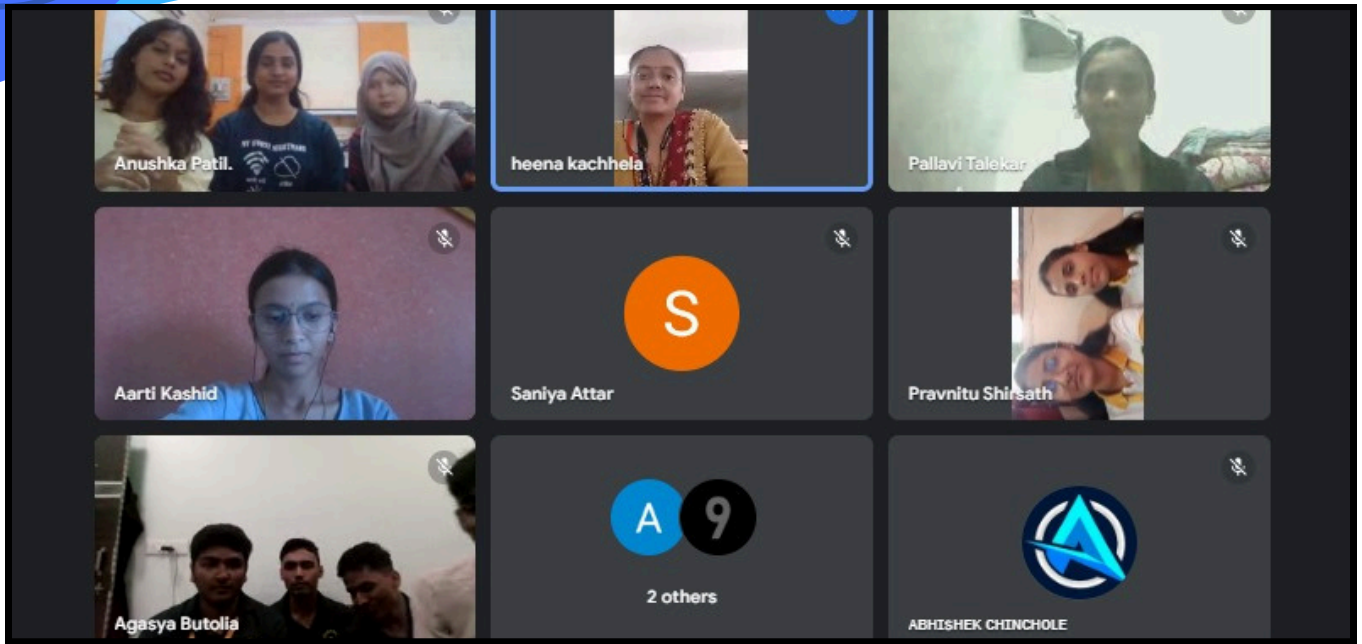
We are pleased to announce the publication of a significant research paper titled: **“IoT-Based Bomb Defusing Robot”**

in the Vidyabharati International Interdisciplinary Research Journal (Volume 18, Issue 1, Mar-May 2024 | ISSN 2319-4979).

**Ms. Sneha Bhange**, from the Department of Computer Science and Engineering (Polytechnic), Tulsiramji Gaikwad Patil College of Engineering and Technology, contributed to this impactful study focused on developing an Arduino-controlled spy robot equipped with wireless night vision and Android app control.

We congratulate Ms. Sneha Bhange and her team for their commendable effort in addressing security challenges through cutting-edge IoT applications.

# Technical Event



Students from the **Computer Science and Engineering** Department of Tulsiramji Gaikwad-Patil College of Engineering and Technology (TGPCET) successfully presented their research papers at a reputed technical event, showcasing their innovative ideas and technical skills.

Their presentations covered emerging trends and practical solutions in the field of computer science, earning appreciation from judges and attendees alike. This achievement reflects the department's focus on academic excellence and research-driven learning.

The college management and faculty congratulated the students on their commendable performance and encouraged them to continue pursuing academic and research excellence.

# Student Publication

*Vidyabharati International Interdisciplinary Research Journal 18(1) Mar.2024 - May.2024*

ISSN 2319-4979

## **IOT BASED SPEAKING SYSTEM FOR MUTE PEOPLE USING HAND GESTURE**

**Prof. Heena B Kachhela**

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**Prof. Sneha R Bhange**

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**Mr. Kartik S Pardhi**

*Tulsiramji Gaikwad Patil College of Engineering and Technology, POLYTECHNIC*

## **Student Research Paper Publication**

We are delighted to share that a team of students from the Department of Computer Science and Engineering (Polytechnic), Tulsiramji Gaikwad Patil College of Engineering and Technology, have successfully published their research paper titled: **“IoT Based Speaking System for Mute People Using Hand Gesture”**

in the prestigious Vidyabharati International Interdisciplinary Research Journal (Vol. 18(1), Mar-May 2024 | ISSN: 2319-4979).

We congratulate the student team and their mentors for this commendable academic achievement and contribution to assistive technology.



DTE Code: 4151

MSBTE Code: 1683

**TULSIRAMJI GAIKWAD-PATIL**  
**College of Engineering & Technology**

Approved by AICTE, Recognized by Govt. Maharashtra & Affiliated to MSBTE, Mumbai

**— POLYTECHNIC —**



**GAIKWAD-PATIL**  
GROUP OF INSTITUTIONS



## Courses we Offer:

- Computer Science & Engineering
- Information Technology
- Civil Engineering
- Mechanical Engineering
- Electrical Engineering
- Electronics & Communication



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