

Tanmay Mishra

📍 Varanasi, India ✉ thetanmaymishra@gmail.com ☎ +91 9516727469 in thetanmaymishra
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Education

Vellore Institute Of Technology, Vellore

Sept 2022 – Jul 2026

B.Tech in Electronics and Communication

- **Coursework:** AI/ML, ROS2, Sensors, PCB Designing, PDB Designing, MATLAB Simulink, Ansys HFSS

Shri Ganesh Senior Secondary School

Sept 2008 – Jul 2021

High School in Mathematics

- **Class 10th :** 91.6 percentage
- **Class 12th :** 93.1 percentage

Skills

Hardware

Embedded Systems Design, Microcontroller Programming (ESP32, STM32), Circuit Design, Communication Protocols (CAN, UART, SPI, I2C) ,Sensor Integration ,Power Management and Battery Systems , PCB Design and Layout

Software

Python, ROS 2, PID Control, Gazebo Simulation, OpenCV, MATLAB, Machine Learning, AI/ML, Cloud Computing (AWS, Azure), IoT Development, SQL, Embedded Firmware Development,C/C++, Data Analysis, TensorFlow, Geospatial Analysis, Automated Systems Development, Web Development (React.js)

Experience

Team Leader

Vellore, India

CropSky

Aug 2024 – Present

- Developing a drone-based crop health system, cutting manual inspection by 60 percent using AI and NDVI imagery.
- Led team to create a mobile app for real-time crop monitoring, boosting farm productivity by 40 percent

ML Intern

Online

Bharat Intern

Jan 2024 – Feb 2024

- Developed and deployed machine learning systems with 95.67 percent accuracy, optimized for real-time interaction via Streamlit and improved model performance through advanced data preprocessing.

Business Analyst Intern

Online

Finlatics

Jul 2023 – Aug 2023

- Conducted financial data analysis using Excel and Python to derive insights, facilitating informed strategic decision-making.
- Created interactive dashboards and visual reports in Power BI to effectively convey key metrics and trends.
- Earned a letter of recommendation for exceptional performance and valuable contributions to the team.

Projects

SatyaAI [🔗](#)

- Developed an AI-powered legal advice chatbot and seamlessly integrated it into a ReactJS website.
- Technologies Utilized: Python, ReactJS, Generative AI, and Streamlit.

SCARA Robot Project

- Designing a fruit and vegetable sorting system leveraging OpenCV for real-time image analysis.
- Technologies Utilized: OpenCV, ROS2, Gazebo, Python, and Machine Learning.

PID Controller for Drone

- Developed a PID controller using ROS2 and Python in the Ignition Gazebo environment.
- Tools Used: Python, ROS2, Ignition Gazebo Fortress

Publications and Design Contest

Radar Signal Processing Research [↗](#)

Jun 2024

Comprehensive Analysis of Radar Signal Processing Techniques for Target Detection and Range Estimation Using MATLAB

AI based Smart Traffic Control System [↗](#)

Sept 2024

At VDAT 2024, I presented a smart traffic control system using OpenCV and SAMA5D27-WLCOM1-EK to optimize traffic signals with real-time vehicle detection.

Fractal-Based Octagonal Antenna [↗](#)

Jun 2024

Secured a design patent for an innovative Fractal-Based Octagonal Antenna

Achievements

National Startup Competition (Central University of Rajasthan)

Top 16 Finalist

Achieved top 16 status in a national competition.

Agrithon (VIT Vellore)

1st Prize Winner

Secured 1st prize for excellence in agricultural innovation.

IDE Bootcamp 2024 (NIT Karnataka)

Selected

CropSky was selected to participate in the IDE Bootcamp 2024.

Certifications

Microsoft Certified: Azure AI Fundamentals

July 2024

Scored 890 marks in Azure AI certification.

AI/ML Geodata Analysis (ISRO)

Aug 2024

Learned about accessing the satellite images and performing the AI/ML analysis after processing it from QGIS software.

Smart Microgrid and Sustainable Mobility (VIT-Vellore)

July 2024

I gained insights into integrating renewable energy sources within smart microgrids for optimized energy management and explored sustainable mobility solutions to promote eco-friendly transportation systems.

Introduction to Prompt Engineering for Generative AI (LinkedIn Learning)

Aug 2023

Got Introduced to Prompt Engineering