

Tanmay Mishra

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Education

Vellore Institute Of Technology, Vellore <i>B.Tech in Electronics and Communication</i>	<i>Sept 2022 – Jul 2026</i>
Shri Ganesh Senior Secondary School <i>High School in Mathematics</i>	<i>Sept 2008 – Jul 2021</i>
<ul style="list-style-type: none">◦ 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

CropSky [🔗](#)

Vellore, India
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

Business Analyst Intern

Finlatics [🔗](#)

Online
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.

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.

Custom Compiler: Schematic Entry Exam (Synopsys)

July 2024

Cleared the Custom Compiler: Schematic Entry Exam by Synopsys, demonstrating expertise in schematic design and circuit simulation.

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.

Stockyy

- This project uses Apache Spark for stock price prediction, leveraging data processing, machine learning, and optimization techniques for accurate forecasting.
- Tools used: Apache Spark, PySpark, Python, VS Code, Pandas, Machine Learning, CSV/Parquet, SQL.

Disaster Management System

- Used ROS2 and Gazebo for the simulation of the rover/drone in tunnel for the purpose of inspection and dedicated PCB was designed.
- Tools Used: Python, ROS2, Gazebo, ESP32, Arduino uno, LiDAR.
- Crack and fault detection model was trained and through openCV I used the model.

Publications and Patents

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

Reboot Hackathon (IEEE-RAS, VIT Vellore)

1st Prize

Achieved 1st prize among 30 teams.

Roboverse Hackathon (IEEE-RAS, VIT Vellore)

2nd Prize

Got 2nd prize for successfully developing the prototype.

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.