

Shubham Sirsat

Electronics & Telecommunication Engineering Student | UAV Systems & Embedded Design

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Professional Summary

Final-year Electronics & Telecommunication Engineering student (SPPU) with hands-on experience engineering and calibrating Pixhawk-based UAV/drone systems and embedded hardware. Proficient in Python, C/C++, and closed-loop control-system design (PID), with additional grounding in AI/ML, Generative AI, and data analytics through certifications from Google, IBM, Deloitte, and Tata.

Internship Experience

Drone Technology Intern

SSG Embedded Solutions, Nagpur

Feb 2026

Remote

- Built foundational expertise in UAV architecture, flight-controller fundamentals, and propulsion/power subsystem integration through an intensive hands-on virtual internship.

Embedded Systems Design Intern

SkillDzire – AICTE Approved Internship Programme

Aug 2025 (3 Weeks)

Remote

- Strengthened embedded systems design skills – microcontroller-based hardware, circuit design, and sensor interfacing – through a structured, AICTE-approved training programme.

Projects

Quadcopter Drone with 2-Axis Gimbal Camera System

2025 – 2026

Dr. Vithalrao Vikhe Patil College of Engineering (SPPU) – Team Project

- Engineered and assembled a quadcopter UAV powered by a **Pixhawk 2.4.8** flight controller, brushless DC motors, ESCs, and a 3S LiPo battery, achieving a thrust-to-weight ratio of **2.4:1**.
- Designed a closed-loop **2-axis gimbal stabilization system**, lifting usable video frame quality from **45% to 92% (82–91% stabilization efficiency)** and delivering GPS position-hold accuracy of **±1.5 m**.
- Calibrated the complete flight-control stack via Mission Planner and presented findings at **COGNOTSAV-2026**, a state-level technical paper & project event.

GPS-Based Autonomous Delivery Drone (Final Year Project – In Progress)

2026 – 2027

Savitribai Phule Pune University

- Developing an autonomous GPS-guided delivery drone on existing Pixhawk hardware, paired with a real-time tracking dashboard/app for live flight and delivery status.

Education

Bachelor of Engineering – Electronics & Telecommunication Engineering

Dr. Vithalrao Vikhe Patil College of Engineering, Ahmednagar – Savitribai Phule Pune University

Graduated: 2027 (Expected)

Ahmednagar, India

SGPA: 9.59 (Sem 1) | 9.36 (Sem 2) | 8.77 (Sem 3) | 9.68 (Sem 4) | 8.86 (Sem 5) | 9.57 (Sem 6)

Technical Skills

Languages: Python, C, C++, Core Java

Developer Tools: Git, GitHub, MATLAB, Mission Planner, Tally ERP 9, Microsoft Office (Word, Excel, PowerPoint)

Technologies / Frameworks: Pixhawk Flight Controller, UAV/Drone Systems, Embedded Systems, GPS & Sensor Integration, PID Control, LangChain, Retrieval-Augmented Generation (RAG)

Certifications

- 5-Day AI Agents Intensive Course** – Google & Kaggle (2025) | **Getting Started with Cybersecurity** – IBM SkillsBuild (2026)
- Getting Started with Artificial Intelligence** – IBM SkillsBuild (2025) | **Journey to Cloud: Envisioning Your Solution** – IBM SkillsBuild (2025)
- Intro to Retrieval Augmented Generation & Lab: RAG with LangChain** – IBM SkillsBuild (2025) | **MATLAB Onramp** – MathWorks (2025)
- Python for Data Science, AI & Development** – IBM/Coursera (2025) | **Data Analytics Job Simulation** – Deloitte, Forage (2025) | **GenAI Data Analytics Simulation** – Tata, Forage (2025)

Achievements & Leadership

Vice-President, Electronics & Telecommunication Engineering Students' Association (EESA) – Dr. Vithalrao Vikhe Patil College of Engineering

Represented **District-Level Kabaddi Team** | | A Grade, Elementary & Intermediate Examinations