

Yash Srivastava

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PROFESSIONAL SUMMARY

UAV autonomy and robotics systems engineer with Georgia Tech graduate training and hands-on experience designing, building, and integrating complete UAV platforms. Proven simulation-to-hardware deployment of PX4/ArduPilot-based navigation, perception, and swarm autonomy.

EDUCATION

Georgia Institute of Technology - Atlanta, GA <i>Masters in Robotics (Artificial Intelligence, Control Systems, Perception)</i>	GPA: 3.93
Vellore Institute of Technology - Chennai, India <i>Bachelor of Technology, Electronics and Computer Engineering</i>	Aug 2022 – May 2024 GPA: 9.03/10
	July 2018 – May 2022

SKILLS

- UAV Autonomy:** PX4, ArduPilot, MAVLink, SITL, Mission Planning, Waypoint Navigation
Robotics & Controls: State Estimation, Sensor Fusion, Motion Planning, Controls, Mobile Robots, Swarms
Programming & Systems: Python, C++, MATLAB, ROS2, Docker, Gazebo Sim, Linux, Git
Perception & AI: Computer Vision, Deep Learning, YOLO, OpenCV, NumPy, PyTorch
Embedded: Raspberry Pi, Pixhawk, Arduino, ESP32

EXPERIENCE

Robotics Engineer (GROWTHH) - Freudenberg NOK Sealing Technologies, <i>Cleveland, GA</i>	Mar 2025 – Jan 2026
• Designed and deployed real-time monitoring and Kanban-based inventory systems, owning sensor interfacing, embedded logic, and software integration, improving throughput by 25% and reducing production stoppage risk.	
Systems Engineer Intern - DroneUp, <i>Virginia Beach, VA</i>	June 2023 – Aug 2023
• Developed and validated a PX4-SITL-based UAV autonomy proof-of-concept using Artificial Potential Fields for collision avoidance, integrating MAVLink-based communication and mission execution; coordinated LTE antenna deployment for long-range (BVLOS) operations.	
Robotics AI R&D SWE Intern - United Parcel Service, <i>Atlanta, GA</i>	Jul 2024 – Mar 2025
• Built and deployed an AI-based human parcel counting system using YOLOv8 pose estimation, designing a real-time computer vision pipeline processing warehouse-scale video streams with >85% accuracy.	
Graduate Teaching Assistant - Georgia Institute of Technology	Aug 2023 – May 2024
• Supported 50+ graduate students across robotics disciplines and maintained a fleet of 45+ TurtleBot3 AMRs, including creating and deploying standardized OS images for reliable lab operation.	

SELECT PROJECTS

Capstone Project: Drone Surveillance System for Poachers and Wildlife

- Architected and built a complete UAV platform from scratch, owning hardware selection and systems integration (airframe, propulsion, ESCs, battery, GPS, sensors, companion computer).
- Integrated ArduPilot-based autonomy with MAVLink communication, implementing GUIDED-mode waypoint navigation and multi-sensor collision avoidance; validated via Dockerized Gazebo simulation prior to hardware deployment and field testing.

Quadrotarium: Testbed for Remotely Accessible Aerial Swarms

- Developed the core software and systems infrastructure for Georgia Tech's ROS2-based Crazyflie swarm drone testbed.
- Enabled 24×7 autonomous drone operations by implementing a FSM-based scheduled charging system with Barrier Certificates for collision-free trajectories.

Navigation using Computer Vision and Machine Learning for AMRs

- Designed a Finite State Machine (FSM)-based navigation algorithm for differential-drive AMRs in GPS-denied environments using ROS2, leveraging LiDAR distance data and dead reckoning for collision avoidance.
- Implemented edge-deployed road sign detection using a trained SVM classifier, selected for higher accuracy and real-time performance, achieving 90% accuracy for perception-driven decision making.

ACHIEVEMENTS & PUBLICATIONS

- IEEE Access (2024):** "Unmanned Aerial Surveillance and Tracking System in Forest Areas for Poachers and Wildlife."
- Avionics Lead,** Team Aviators International (VIT Chennai): Led the development of the team's first autonomous UAV.
- IEEE Photonics Project Expo 2021:** 1st Prize for Autonomous UAV Flight.