

# Yash Srivastava

Portfolio: [yash14s.github.io](https://yash14s.github.io) | GitHub: [github.com/yash14s](https://github.com/yash14s) | LinkedIn: [linkedin.com/in/yash14s](https://linkedin.com/in/yash14s)  
srivastavayash14@yahoo.in | (470) 923-6909 | Alpharetta, GA | Open to Relocation

## 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

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

## 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 (GROWTTH)** - Freudenberg NOK Sealing Technologies, *Cleveland, GA* 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, *Virginia Beach, VA* 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, *Atlanta, GA* 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 24x7 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:** 1<sup>st</sup> Prize for Autonomous UAV Flight.