Yash Srivastava

Portfolio: yash14s.github.io | GitHub: github.com/yash14s | LinkedIn: linkedin.com/in/yash14s
yash33srivastava@gmail.com | (470) 923–6909 | Alpharetta, GA | Open to Relocation

Professional Summary

Embedded Systems and Edge ML Engineer with a MS in Robotics from Georgia Tech. Experienced in programming microcontrollers, interfacing sensors using UART/I2C/SPI, and deploying machine learning models on embedded platforms for real-time perception and control. Strong background in C++, Python, firmware development, hardware integration, and simulation-to-hardware deployment.

Technical Skills

Embedded Systems: Embedded C++, UART, I2C, SPI, UWB, sensor interfacing, real-time data acquisition
Microcontrollers & Boards: Arduino, ESP32, Adafruit M0, Raspberry Pi, Pixhawk
Edge ML & AI: On-device inference, real-time ML pipelines, model evaluation, OpenCV, PyTorch
Programming: C++, Python, MATLAB
Systems & Tools: Linux, Docker, ROS2, Gazebo, Git

Experience

Robotics Engineer (GROWTTH) - Freudenberg NOK Sealing Technologies, *Cleveland, GA* Mar 2025 – Jan 2026

- Developed embedded control logic for sensor-driven conveyor monitoring system, integrating hardware inputs with microcontroller-based signaling to improve system throughput by 25%.
- Led software and sensor integration for Kanban-based inventory monitoring system, interfacing industrial sensors and automation hardware; delivered $1.2k annual labor savings.

Robotics AI R&D SWE Intern - United Parcel Service, *Atlanta, GA* Jul 2024 – Mar 2025

- Built and deployed a YOLOv8-based vision pipeline for human parcel counting, optimizing preprocessing and inference for near real-time performance on warehouse-scale video streams with $>85\%$ accuracy.

Systems Engineer Intern - DroneUp, *Virginia Beach, VA* June 2023 – Aug 2023

- Developed C++ autonomy modules in PX4-SITL for UAV navigation using Artificial Potential Fields; integrated MAVLink communication and validated in simulation.

Graduate Teaching Assistant - Georgia Institute of Technology Aug 2023 – May 2024

- Supported 50+ graduate students across robotics disciplines through instruction, office hours, and maintained a fleet of 45+ TurtleBot3 AMRs, including creating and deploying a standardized OS image for reliable lab operation.

Embedded & Edge Projects

UWB-Based Indoor Localization and Tracking

- Developed C++ firmware on Adafruit M0 for UWB localization using Decawave modules; modified Two-Way Ranging protocol to sync 8 anchors, achieving centimeter-level XY accuracy.
- Designed real-time packet handling pipeline achieving 94% packet response rate at 8 Hz update frequency.

Drone Surveillance System for Poachers and Wildlife

- Built and integrated UAV hardware (frame, ESCs, motors, sensors, companion compute) and programmed ArduPilot GUIDED-mode autonomy; integrated Raspberry Pi and Arduino via ROSSerial for sensor fusion and obstacle avoidance.
- Trained YOLOv5 model (mAP 0.914, F1 0.88) and deployed optimized inference pipeline for real-time detection; validated in Dockerized Gazebo before hardware and field testing.

Navigation using Computer Vision and Machine Learning for AMRs

- Designed a Finite State Machine (FSM)-based navigation stack for differential-drive AMRs using ROS2, integrating LiDAR sensing, odometry, and onboard compute 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.

Education

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

Achievements & Publications

IEEE Access (2024): "Unmanned Aerial Surveillance and Tracking System in Forest Areas for Poachers and Wildlife."

Outstanding Presentation Award: "Autonomous Bot with ML-Based Reactive Navigation", Robotics, Intelligent Automation and Control Technologies 2021 (Conference).

Avionics Lead, Team Aviators International (VIT Chennai): Led the development of the team's first autonomous UAV.