

# 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)  
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## PROFESSIONAL SUMMARY

AI/ML Engineer with graduate training from Georgia Tech and hands-on experience building and deploying applied ML systems. Strong background in computer vision, deep learning, and data-driven model development using Python and PyTorch, with experience taking models from data collection and training through evaluation and real-world deployment.

## EDUCATION

### Georgia Institute of Technology - Atlanta, GA

*Masters in Robotics (Artificial Intelligence, Perception, Controls)*

GPA: 3.93

Aug 2022 – May 2024

### Vellore Institute of Technology - Chennai, India

*Bachelor of Technology, Electronics and Computer Engineering*

GPA: 9.03/10

July 2018 – May 2022

## SKILLS

**Machine Learning:** Supervised and Unsupervised Learning (k-NN, Decision Trees, Bayesian Networks, GMMs, EM)

**Deep Learning:** ANNs, CNNs, RNNs, Transformers, Diffusion Models, LLM architectures

**Computer Vision:** Object Detection, Tracking, Segmentation; YOLO, U-Net, GANs

**Programming & Frameworks:** Python, PyTorch, NumPy, OpenCV, scikit-learn, Docker, Linux, Git

**Pipelines & Deployment:** Data collection, preprocessing, model training and evaluation, edge-inference optimization

## EXPERIENCE

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

- Designed and deployed a real-time monitoring system integrating sensor data and software logic to automate operational decision-making, reducing idle time and improving throughput by 25%.
- Led development of a software-driven Kanban inventory system, integrating sensor inputs and automation logic to deliver \$1.2k in annual labor savings and reduce production stoppage risk.

### 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, developing an end-to-end computer vision pipeline including data preprocessing, feature extraction, model inference, and real-time evaluation on warehouse-scale video streams, achieving >85% accuracy.

### Systems Engineer Intern - DroneUp, *Virginia Beach, VA*

June 2023 – Aug 2023

- Developed and validated a PX4-SITL-based safe navigation proof-of-concept in C++ for autonomy using Artificial Potential Fields and MAVLink-based communication, and led cross-team coordination for LTE antenna deployment.

### Graduate Teaching Assistant - Georgia Institute of Technology

Aug 2023 – May 2024

- Supported 50+ graduate students across robotics disciplines through instruction and office hours; maintained a fleet of 45+ TurtleBot3 AMRs and created and labeled image datasets for perception-focused assignments, including deployment of standardized OS images for reliable lab operation.

## SELECT PROJECTS

### 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.

### Capstone Project: Drone Surveillance System for Poachers and Wildlife

- Built a drone-based anti-poaching system using a Raspberry Pi-Arduino setup, implementing autonomous navigation with stereo-vision and ultrasonic-based collision avoidance.
- Developed a Dockerized Gazebo simulation to validate the autonomy pipeline prior to deployment; trained a YOLOv5 object detection model for human and wildlife detection, achieving mAP 0.914 and F1 score 0.88.

### Autonomous Bot with ML-Based Reactive Navigation

- Built a differential-drive robot using a decision-tree-based ML model for real-time reactive navigation, integrating ultrasonic sensor data on embedded hardware (Raspberry Pi, Arduino) and achieving 97% accuracy on a test dataset.

## 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”, RIACT 2021.

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