

Yash Srivastava

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

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 (GROWTHH)** - 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.