SREESANTH ADELLI

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EDUCATION

OLIN COLLEGE OF ENGINEERING Needham, MA

Bachelor of Science in Computer Science and Engineering Graduating 2027

Relevant Coursework: Linear Algebra, Multivariate Calculus, Modeling and Simulation, Mechanical Design, Software Design, Circuits, Products and Markets

SKILLS

Programming & Development: Python, C++, Java, MATLAB, Bash, Git/GitHub, Docker, AWS, REST APIs, SQL, JavaScript, Make/CMake

Embedded Systems & Robotics: ROS2, Gazebo, KiCad, PCB Design, Raspberry Pi, CAN Bus, UART, SPI, I2C, Real-Time Data Processing, Oscilloscopes

Machine Learning & Computer Vision: YOLOv8, OpenCV, PyTorch, TensorFlow, TensorRT, Pandas, NumPy, SciPy

EXPERIENCES

COMPUTER VISION LEAD – OLIN AERONAUTICS Fall 2024 – Present

- Implemented a real-time vision pipeline for sub-80ms object detection, tracking, and mapping, utilizing YOLOv8, OpenCV, TensorRT, and ROS2, achieving 97% mAP with a custom-trained model on aerial imagery.
- Designed and optimized drop-decision algorithms for sub-10m precision payload deployment, integrating Kalman filtering and aerodynamics modeling for greater accuracy.

VP OF COMMUNICATIONS – OLIN STUDENT GOVERNMENT Fall 2024 – Present

- Oversee communication strategies between students, student government, and administration/faculty, ensuring clear and effective information flow across over 600 stakeholders.
- Serve as an editor for the weekly administrative newsletter, coordinating content from 10+ administrative offices to keep the campus informed and engaged with institutional updates.

CO-AUTHOR, SPEECH RECOGNITION ML RESEARCH Fall 2024

- Presented at the AAAS Poster Competition, showcasing research on mitigating bias in Automatic Speech Recognition (ASR) for stuttered and accented speech
- Trained and fine-tuned wave2vec and Whisper models on curated datasets to reduce Word Error Rate (WER) by 14% for stuttered English and Character Error Rate (CER) by 47% for stuttered Mandarin, significantly enhancing performance for underrepresented speech patterns

FIELD NAVIGATION SUBTEAM MEMBER – OLIN ROBOTICS LAB Fall 2024

- Developed and optimized path planning algorithms using ROS2 to enhance autonomous navigation, ensuring reliable and efficient movement in agricultural environments.
- Tuned PID control systems for precise movement and trajectory tracking, achieving improved accuracy and stability through extensive Gazebo simulations.