AADHYA PUTTUR

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EDUCATION

Worcester Polytechnic Institute   **August 2019 - May 2023**
Bachelor's, Computer Science
- Computer Vision (graduate), Algorithms: Design & Analysis (graduate), Machine Learning, Software Engineering, Accelerated Object-Oriented Design Concepts, Matrices and Linear Algebra, Probability

SKILLS

Languages and Programs: Python, PyTorch, Java, React Native, JavaScript, Vite, NoSQL, SQL, Javafx, C, C++
Developer Tools: Docker, Linux, AWS, MongoDB, Git, Jira, Agile Methodology, Jira, Figma
Certifications: Microsoft Certified: Azure AI Fundamentals

PROFESSIONAL EXPERIENCE

Skydio   **Boston, MA, USA**
Autonomy Engineer Intern   *July 2023 - October 2023*
- Implemented an error-sensing system on Skydio X2 drones to communicate with the MAVLink interface (C++)
- Created real-time communication of critical errors to the pilot, ensuring safer/informed piloting decisions
- Developed and validated the 'Max Endurance' feature using Skydio's API to optimize energy efficiency, maintaining a constant 8 m/s velocity in Skydio drones

MIT Lincoln Laboratory   **Lexington, MA, USA**
Research Technical Intern   *July 2022 - August 2022*
- Improved Airborne LiDAR measurements by predicting and filling missing data points using tangent plane of hole boundary points (Python) in dense forest areas, achieving a data completion rate of approximately 61.9%
- Developed an efficient algorithm for point cloud data mesh repair, reducing processing time by 83.7%

MIT Lincoln Laboratory   **Lexington, MA, USA**
Research Technical Intern   *May 2021 - August 2021*
- Reduced communication speed of Arduino MKRZero by 20 ms by optimizing serial data transfer (MATLAB) and implemented radar technology capable of motion detection
- Performed extensive troubleshooting, documented daily discoveries, and offered alternative communication protocols, while providing consistent data transfer improvement suggestions to the team

Raytheon BBN Technologies   **Cambridge, MA, USA**
Research Technical Intern   *May 2020 - August 2020*
- Developed a communication system between a hierarchical task network (HTN) and a MySQL database, enabling the execution of autogenerated commands for drone swarms within a simulation.
- Integrated communication between a Docker container and a Redis client for effective data exchange, utilizing Docker containers for processing drone location data.

Raytheon BBN Technologies   **Cambridge, MA, USA**
Software Engineering Intern   *July 2019 - August 2019*
- Established a communication network between Skydio's R1 drone and an unidentified drone using TCP connections and multithreading in Java
- Acquired proficiency in Skydio's API to transmit specific commands to control the drone effectively

PROJECTS & OUTSIDE EXPERIENCE

Bipedal Quadruped Robot   **Worcester, MA, USA**
WPI Major Qualifying Project   *August 2022 - March 2023*
- Constructed a 12 Degrees of Freedom Quadruped Robot by overseeing a team of 4 robotics engineers as the Computer Vision Lead, I implemented obstacle detection and target tracking from scratch
- Implemented computer vision algorithms for precise environment depth using 2 Intel RealSense cameras.

WPI Mass General Brigham Hospital   **Worcester, MA, USA**
Software Lead   *March 2022 - May 2022*
- · Led the development of a 20,000-line, full-stack Java application as part of a 10-person Agile Scrum team, utilizing critical tools such as Apache Database, Jira, MySQL, JavaFX, and Java over four iterations in six weeks
- · Restructuring the team and adopting agile methodologies for a seamless front-end and back-end integration

Spectrum (WPI COVID Innovation Challenge)   **Remote**
Hackathon Winner   *July 2020 - July 2020*
- Prototyped a COVID-19 PPE mask in three days that uses UV light to kill germs

Face Swap   **Worcester, MA, USA**
Computer Vision Graduate Course   *October 2022 - October 2022*
- Successfully created Face Swap by utilizing Triangulation and Thin Plate Spline

Edge Detection And Image Filtering   **Worcester, MA, USA**
Computer Vision Graduate Course   *October 2022 - October 2022*
- Implemented PB boundary detection algorithm by creating image processing tools: using Pytorch

Panorama Stitching   **Worcester, MA, USA**
Computer Vision Graduate Course   *October 2022 - October 2022*
- Implemented feature matching and RANSAC algorithm and calculated homography between two images

Camera Calibration   **Worcester, MA, USA**
Computer Vision Graduate Course
- Optimized camera parameters by reducing reprojection error by 11%