Andrew Moses

EDUCATION

University ███████████████
Bachelor of Science in Computer Science
- Awards/Honors: Excellence in Community Service (Spring 2023), ██ Dean's List (Fall 2023)
- Selected Coursework: Data Structures & Algorithms, Java Programming, Calculus I&II, Intro to Systems

EXPERIENCE

Information Technology Intern   Sep. 2022 – Jun. 2023
██ *Department of Education*   ███████
- Assisted in on-boarding and configuring 300 desktops, laptops, and printers
- Developed a system using DuckyScript to simulate HID input devices, allowing for a substantially faster on-boarding experience and item throughput
- Responded to help requests around the building, troubleshooted devices and submitted tickets where needed

Summer Research Scholar   June. 2022 – August. 2022
MIT Lincoln Laboratory ██████████████████   █████████ *MA*
- Led the technical development and guided a team in creating high-quality aerial images by designing a backprojection algorithm for a Synthetic Aperture Radar (SAR)
- Boosted image fidelity in 80% of scans by programming an on-the-fly color limit adjuster, allowing users to configure the bounds of the SAR image
- Designed a backprojection pipeline for both online and offline emulated scans to be displayed in Matplotlib

PROJECTS

OpenCV ██ **People Counter** | *Python, OpenCV, discord.py, YOLOv7, Express.js*   Sep. 2024
- Developed a microservice to inform users about lab occupancy via Python Discord bot
- Integrated computer vision by capturing images with OpenCV and processing them using the YOLOv7 model to determine the number of people in the lab
- Utilized `discord.ext.tasks` to schedule periodic updates every 15 minutes, ensuring real-time accuracy
- Implemented redundancy with two Zigbee door sensors; developed an Express.js web server to relay state-synchronized sensor data to the bot due to access point isolation limitations

████████████ **Schedule Generator** | *JavaScript, HTML, Bootstrap, Express, Node.js*   Aug. 2024
- Developed a resource allowing students to convert their plain-text class schedules to an ICS calendar format they could import into personal calendar applications, eliminating tedious manual entry
- Developed a JavaScript front-end to parse the relevant recurring class data and display it to the user
- Used Express with Node.js to efficiently generate ICS calendar events, removing classes on days specified to reflect the university's academic calendar; generated appropriate events for exams
- Used by 860 students within the first 3 months of availability

Personal Website | *Astro, JavaScript, HTML/CSS*   Jun. 2024
- Developed and deployed a static website to demonstrate my personal social media links and blog posts
- Utilized Astro and npm to compile the site and optimize performance by minifying page bundles, enhancing load speeds
- Implemented responsive CSS breakpoints to ensure a smooth and comprehensive user experience across devices, with responsiveness at any screen size

Robotics Team Captain | *Java, Fusion360, FDM Printing*   Mar. 2021 – Jun. 2023
- Led a team of 14 students in building a robot for a multi-stage competition as team captain
- Wrote and maintained the full Java codebase and markdown documentation for the software controlling the robot
- Programmed a highly accurate odometry system to process input from rotational encoders and fiducial markers, interfacing with a finite state machine to operate successfully in a fully autonomous period of competition

TECHNICAL SKILLS

Languages: Java, Python, HTML/CSS/JavaScript
Developer Tools: Git, Docker, VS Code, Neovim, IntelliJ