

Marcus Hurt

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Objective

Seeking a full-time position developing innovative systems in computer engineering in the Greater Boston area

Education

University of Michigan, Ann Arbor, MI

April 2023

Bachelor of Science in Engineering in Computer Engineering

Major GPA: 3.035

Relevant Courses: Advanced Embedded Systems, Computer Security, Computer Vision, Data Structures and Algorithms, Embedded Control Systems, Introduction to Operating Systems

Skills

Arduino, C, C++, C#, JavaScript, Python, HTML, GoLang, Verilog, RAPID, IoT, MATLAB, Microsoft suite

Job Experience

Optimax Systems, Inc. – Robotics Software Intern

June 2021 – December 2022

- Developed remote workflow for code updates and testing using GIT
- Designed MATLAB, HTML, JS, and Python GUIs to interface with ABB robotic arms and tool path algorithms
- Implemented efficient workflows to deploy code revisions from development to manufacturing
- Streamlined robot calibration procedures for the manufacturing floor by introducing version control and reducing code base by half
- Developed applications using RAPID, JavaScript, Python, MATLAB, HTML, C++

University of Michigan Tech Shop – Sales Associate

September 2019 – April 2022

- Implemented POS system from sales floor for university technology acquisition
- Maintained updated knowledge base of technology for consumer and departmental use

University of Michigan Dept. of Mechanical Engineering – Research Assistant

August 2018 – May 2019

“Applications of the Passive Dynamic Walker Method for Bipedal Robots”

- Created an inexpensive base for passive-dynamic research to increase accessibility for other researchers
- Coded Arduino sketches that enabled the robot to walk more efficiently
- Successfully integrated cd, mechanical, and electrical components to achieve a working prototype

Whirlpool Corporation, Benton Harbor, MI – Engineering Intern

June 2018 – August 2018

- Created Google scripts that interpreted workload data and automated productivity tracking
- Condensed systems for recording and tracking data to one simplified team document
- Conducted safety reviews/audits to maintain global safety standards
- Developed team website that aggregated team information and improved efficiency
- Assessed risk and feasibility of potential products to inform licensing decisions

Project Experience

University of Michigan – Thrust Vector Controlled (TVC) Hopper

August 2022 - December 2022

- Created a Thrust Vector Controlled hopper powered by an Electric Ducted Fan (EDF)
- Designed and tested power and flight computer PCBs to achieve flight with altitude and attitude control
- Developed control and telemetry TCP server hosted on a Raspberry Pi

University of Michigan – Forest Health Sensor Project

August 2021 - December 2021

- Created embedded sensor array to monitor and track forest health including forest fires
- Monitored CO2 levels, temperature, and GPS location with I2C-connected sensors
- Implemented cloud communications via LTE and LoRa feather modules using UART
- Relayed data from arrays to a central hub using LoRa modules
- Demonstrated ability to expand sensor connections over SPI, I2C, or UART

University of Michigan – Autonomous Quadcopter Project

August 2018 – December 2018

- Led a four-person team programming an autonomous quadcopter to navigate obstacles
- Implemented Autonomous navigation using PID controls, Ardupilot and Mission Planner

Volunteer Experience

FIRST Robotics – Mentor

May 2018 – May 2019

- Mentor for FIRST students in FRC, VEX, FTC, and LEGO robotics