Eli Goreta

Ann Arbor, Michigan

Website: egoreta.github.io | Email: egoreta@umich.edu | Github: egoreta

Education

University of Michigan - Ann Arbor: College of Engineering April 2026
Bachelor of Science in Engineering in Computer Engineering *Ann Arbor, Michigan*
GPA: 3.352

Experience

Systems Integration Lead September 2022 – Present
Michigan Autonomous Aerial Vehicles (MAAV)

- Manages the integration of all developments from embedded systems, software, and structures teams into our end-product aircraft, ensuring all software/hardware blends seamlessly
- Designs and implements custom PCBs using Altium that are part of the onboard flight system
- Writes embedded software for onboard Orange Cube flight controller using PX4 flight stack for managing flight computing, motor control, and sensor I/O using a variety of communication protocols

Course Grader August 2023 – Present
EECS 183: Elementary Programming Concepts

- Grades code quality on student's programming projects and exams in 1,200+ student course
- Proctors and administrates student examinations
- Assists at special events throughout the course, including a student final project showcase at the end of the semester

College Instructor June 2021 – August 2024
University of Michigan: Dearborn - Math Corps *Dearborn, Michigan*

- Instructed 60 middle-school students on both core and advanced mathematics concepts and administrated activities
- Managed 18-person team of high-school teaching assistants and worked closely with mathematics faculty

Technical Skills

Software : C/C++, C#, Java, Python, MATLAB, Julia, Verilog, ARM, Git, ROS, Gazebo, Fusion360, Altium, Embedded Communication Protocols

Relevant Coursework : Embedded Systems, Signals and Systems, Computer Vision, Analog Circuits, Data Structures and Algorithms, Digital Logic Design/FPGA Programming

Projects

6 Cell Battery Voltage Monitoring PCB
Michigan Autonomous Aerial Vehicles

- Designed, programmed and integrated a custom PCB with an integrated Texas Instruments processor using Altium that monitors a 6 cell, 22000 mAh battery onboard our competition drone. The PCB communicates via I2C with an external Arduino and the onboard Orange Cube flight controller.

Color-Based Vision Tracker
Personal Project

- Developed an Arduino program that identifies a subject via color, trained by capturing images of the subject, controlling two servo motors allowing for a camera to physically track (tilt and rotation, turreted-style) the subject in real time.

Maze Solving Algorithm
Algorithms and Data Structures

- Developed a multi-level maze solving algorithm in C++ using both depth-first-search and breadth-first-search searching and backtracing techniques with custom data structures.

Volunteer Work

Robotics Mentor April 2022 – Present
FRC 5090 - Torquenados

- Instructs and advises students of world championship-level team in robotics engineering, including advanced programming skills and algorithms, embedded systems design, and engineering design processes