Eli Goreta

Ann Arbor, Michigan

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Education

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

Technical Skills

Languages/ Software : C/C++, C#, Java, Python, MATLAB, Julia, Verilog, ARM, Git, ROS, Gazebo, Fusion360, Altium, Communication Protocols (I2C, USB, UART)

Relevant Coursework : Algorithms and Data Structures, Analog Circuits/Signals, Digital Logic Design/FPGA Programming, Computer Organization, Linear Algebra, Differential Equations

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 works together
- For embedded systems, designed a PCB for use onboard a drone for a custom 6-cell battery voltage monitoring system
- Writes embdedded software for onboard microcontroller 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 – Present
University of Michigan: Dearborn - Math Corps *Dearborn, Michigan*

- Instructs 60 middle-school students on both core and advanced mathematics concepts and administrates activities
- Manages 18-person team of high-school teaching assistants
- Works closely with UM-Dearborn Mathematics faculty

Projects

Color-Based Vision Tracker
Personal Project

- Developed an Arduino program that determines a subject in a video of a predetermined hex-value, 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.

CPU and RAM Simulators
Computer Organization

- Developed a suite of programs that simulate the cache, virtual memory, and pipelined instruction processing of a CPU and RAM that interface with a custom, 32-bit assembly language.

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