Abdullah H Negm

github/abdnegm | (434) 480-5126 | abdnegm@mit.edu

EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA — May 2025
Candidate for Bachelor of Science in Electrical Engineering and Computer Science (EECS) — GPA: 4.2/5

- Select courses: Microcomputer Project Lab • Digital Systems Lab (F23) • Elements of Software Construction • Computation Structures • Dynamical System Modeling and Control Design (F23) • Fundamentals of Programming • Electronics First • web.lab

EXPERIENCES

MIT Media Lab — June – August 2023
Undergraduate researcher in the Fluid Interfaces group — Cambridge, MA

- Wrote Python scripts to control the movement of two open source drones and incorporated BCI technology (primarily a user's focus) to interact with the drones
- Decreased loading time of HUMANS project website by ~75% after analyzing and implementing optimizations to the images and widgets visualizing a nanowafer in ReactJS
- Designed and programmed multimedia widgets that accommodate the dynamic nature of the NeuraFutures project website in ReactJS

Human Computer-Interaction Institute at Carnegie Mellon University — May – August 2022
Undergraduate researcher in the OH!Lab — Pittsburgh, PA

- Refactored and updated GameAware, a JavaScript toolkit that overlays interfaces onto Twitch livestreams and displays real time data/information from Unity games
- Developed a NodeJS server and Javascript program that sends real time data from games to livestreams to be displayed

PROJECTS

Microcomputer Project Lab: Final Project — April – May 2023

- Designed and created a 4x4 mini chess board for solving puzzles with instant feedback in C
- Constructed a multiplexed grid of photoresistors and LEDs (using a PSoC for state and processing) to track the board state, display valid moves for lifted pieces, and give feedback for a user's moves

Digital Systems Lab: Final Project — October - December 2023

- Building a system that allows users to simultaneously draw on one canvas across two FPGAs
- Designed and implementing a pipelined module-level schematic that interfaces with a touchscreen LCD display (using SPI and I2C), communicates with other FPGAs (via bluetooth), and manages the logic and features (e.g., BRAM to store pixels)

Intro to EECS via Interconnected Embedded Systems: Final Project — April – May 2022

- Built an embedded system that allows users to take and edit pictures directly on an ESP32 microcontroller alongside an accompanying viewing and editing website
- Wrote firmware in C for taking and editing photos on a camera module and LCD display that allows users to draw freely with a joystick controller and create shapes with voice commands

SKILLS

Embedded systems, digital systems, software and web development, and human-computer interaction
Programming Languages: C, C++, SystemVerilog, Python, TypeScript, Assembly, HTML, CSS
Software & Tools: digital waveform viewer, Git, ReactJS, NodeJS, Figma
Hardware: microcontroller, FPGA, breadboarding, soldering, oscilloscope (basic)