Molly McHenry

https://molly-mchenry-portfolio.vercel.app/
69 Brown St, Box 6470, Providence, RI 02912 • (864) 354-3494 • molly_mchenry@brown.edu

EDUCATION

Brown University, *Sc.B. Applied Math-Computer Science* 4.0/4.0 GPA *Sept 2021 - May 2025*
Relevant Coursework**:** Real-time & Embedded Software, Software Engineering, Computer Systems, Data Structures & Algorithms, Deterministic Modeling, Numerical Optimization, Statistics, Machine Learning, Graphs & Networks

WORK EXPERIENCE

IRIS Inc., *Embedded Software Intern* Remote | Jan 2024 - Current

- Developing real-time sensing & actuating medical headbands aimed at reversing Parkinson's symptoms, using SAMD MCUs & sensor arrays
- Design, test, & deploy MCU software applications, specializing in C++ programming, sensor communication protocols (I2C, SPI), Bluetooth communication, & iPhone & Android App development
- Working with the CTO to refine the state machine for the IRIS device

Skyryse, *Systems Test Engineer Intern* Los Angeles, CA | June-Aug 2024

- Developed a telemetry parsing system for the System Integration Lab, capturing & parsing UDP packets with a custom C program, made dynamic to new software drops via Python & MATLAB scripts
- Created an RTD software tool to read fault data from NVM on the FCA for the embedded software team, worked with the VNV & embedded software teams to shape the design & specs of the utility
- Worked with DevOps teams to ideate a streamlined, low-latency software pipeline for telemetry data

Brown University, *Software Engineering Research Assistant* Providence, RI | Sept-Dec 2023

- Collaborated with a professor & front-end dev. to build an IoT app to streamline end-user control of devices
- Developed features for the backend rule-based engine for controlling smart devices

Brown University, *Teaching Assistant: Intro to Software Engineering* Providence, RI | Jan - Dec 2023

- Spearheaded project management for student teams, overseeing the development of full-stack web applications
- Conducted debugging & conceptual sessions & provided constructive code reviews for student projects

PROJECTS

Arduino Hero *(Embedded C, Arduino, CAD)*

- Collaborated with a team to build a rhythm game consisting of Arduino MKR1000 microcontrollers, 3D-printed guitar controllers, an LED matrix fretboard, & an LCD screen to provide real-time game information
- Created an exhaustive design & testing plan, constructed all hardware components
- Used UART communication between microcontrollers, serial communication for controller-to-software interaction, an ISR to process console sensor events, & a Watchdog Timer for beat latency errors

EXTRACURRICULARS

Student Pilot, *Private Pilot's License* June 2020 – Current

- Pilot Cessna 172 aircraft & independently study aviation mechanics, electrical systems, & flight physics

SKILLS & INTERESTS

Technical Skills: Embedded C/C++**,** Python, NumPy, Matlab, Java, MongoDB, APIs, Typescript, React, Node.js, dSPACE, RTDs, Simulink, Telemetry
Interests: sustainable aviation, ultimate frisbee, women's professional soccer, & NPR Tiny Desk Concerts