

# Molly McHenry

<https://swe-portfolio-git-swe-site-mollys-projects.vercel.app/>

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## EDUCATION

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**Brown University**, *Sc.B. Applied Math-Computer Science* 3.97/4.00 GPA Sept 2021 - May 2025

Relevant Coursework: Software Engineering, Computer Networks, Machine Learning, Computer Systems, Real-time & Embedded Software, Data Structures & Algorithms, Numerical Optimization, Graphs & Networks

## WORK EXPERIENCE

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

- Developing real-time sensing & actuating medical headbands aimed at reversing Parkinson's symptoms
- Designed, tested, & deployed MCU software applications, specializing in C++ programming, sensor communication protocols (I2C, SPI), Bluetooth communication, & iPhone/Android App development

**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 professor & front-end dev. to build an IoT app to streamline end-user control of smart 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

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**Trek Travel Planning Web App** (*Java, React, Typescript, HTML, CSS*)

- Designed a social media web app facilitating university students' connection & sharing of travel plans
- Engineered an internal API server capable of handling account creation, user events, posts, & friending
- Created a recommendation algorithm for custom ordering of friend posts based on user engagement patterns

**Arduino Hero** (*C, Python*)

- Collaborated with a team to build a rhythm game consisting of a real-time C code base, three microcontrollers, a guitar controller, and a gameboard
- Created an exhaustive design & testing plan, which included traceability matrices and formal requirements

## EXTRACURRICULARS

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

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

## SKILLS & INTERESTS

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**Technical Skills:** C/C++, Python, Java, JavaScript, TypeScript, React, React Native, Firebase, HTML, CSS, Moshi, Matlab, Fuzz/Integration/Server/Unit testing, APIs, MongoDB, NumPy

**Interests:** sustainable aviation, women's professional soccer, & NPR Tiny Desk Concerts