Rebecca Flach

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Education

Olin College of Engineering, Needham MA   **May 2026**
- Bachelor of Science, Engineering with Computing
- 3.75 GPA

Relevant Coursework: Mechatronics (systems engineering), Software Design, Modeling and Simulation, Quantitative Engineering Analysis (calculus, physics, Matlab), Introduction to Sensors, Instrumentation and Measurement (circuits and electronics).

Skills

Python (pandas, NumPy, scikit-learn), Matlab, Swift, Javascript (Typescript, React, d3js), Arduino, Java, React Native.

Experience

OCCaM Lab   **May-Aug 2023**
Student Researcher
- Used Python and Swift to increase the precision of indoor navigation using GraphSLAM, Cloud Anchors, and visual-inertial odometry.
- Worked on the Swift app, focusing on accessibility and user experience.

Kite Project   **Feb – May 2023**
Senior Capstone App Development Assistant
- Hired by senior capstone entrepreneurship project due to specialized skills in React Native.
- Added features and integrated Alpaca AI, was consulted on other implementation details and technical issues.

Rosbash Lab   **Jan-May 2023**
Senior Capstone Web Development Assistant
- Hired by senior capstone team, working on behalf of Brandeis Rosbash Lab, for the implementation of a web app that was beyond the team's capabilities.
- Created an interactive experiment scheduling application using React.

TheSIS   **Aug 2021-Mar 2022**
Independent Project
- Built a redesigned app for my high school's student information system based on feedback from peers, teachers, and administrators.
- Worked with school district administration and external contacts to try to expand the scope of the project.

MREN   **Dec 2020-Aug 2021**
Web Development Intern
- Interned doing full stack web development using React, Express, MongoDB, and Nodejs.
- Worked on major features independently and made substantial contributions to the design.

US Chess Center, Friends of the KBC Library, Tucson CWRT, Remote
Technology Management Volunteer
- Modernized several local nonprofits by creating websites, teaching tech skills, and digitizing data management and outreach systems.

Projects

- [Set Finder](): OpenCV based solution finder for the card game SET.
- [Spotify Synthesis](): Data analysis of Spotify API data.
- [COVID Data Reporting Visualization](): Animated data visualization using d3.js to show delayed reporting ([info]()).