

Sophia Fu

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Education

Northeastern University - Khoury College of Computer Sciences

Bachelor of Science in Computer Science, Minor in Computational Social Science

Boston, MA

Expected May 2027

Honors & Awards: FinHacks 1st Place (2025), Dean's List (2025, 2024, 2023), PVSA Gold (2022, 2021)

Relevant Coursework: Algorithms and Data, Object-Oriented Design, Computer Systems, Engineering LLM-Integrated Systems, Database Design, Theory of Computation, Programming Languages, Foundations of Data Science

Skills

Languages: JavaScript, Typescript, Java, Python, C, C++, HTML, CSS, SQL, R, DrRacket

Frameworks and Libraries: React, Express.js, Node.js, Flask, Tailwind CSS, NumPy, pandas, Matplotlib

Technologies and Tools: AWS, MongoDB, Docker, MySQL, Supabase, Git, npm/Yarn, Jupyter Notebook, JUnit, LaTeX

Experience

L3Harris Technologies

Rochester, NY

Software Engineer Intern

May – August 2025

- Optimized C++ driver-level caching mechanisms to reduce Web GUI update latency from ~3 seconds to near-instantaneous for satellite communication components (power amplifiers, modems, beacon receivers) within a Linux environment.
- Extended driver functionality by implementing thread-safe getter and setter interfaces, enabling greater flexibility and modular access to hardware data.

The Brain ImPACT Lab

Boston, MA

Undergraduate Research Assistant

September 2024 – Present

- Collaborate with researchers in incorporating data management and applying computational modeling of the brain using R.
- Aggregate 6000+ data points for TBI clinical trials and write 50+ detailed reports following each session for 12-weeks.

NUROVER

Boston, MA

Software Developer

September 2024 – September 2025

- Implemented interactive UI elements (buttons, LED Matrix) that publish messages to ROS 2 topics, controlling robot behavior and expanding range of customizable behaviors.
- Conducted system integration tests using ROS 2 bring-up to validate and ensure reliability of multi-node communication.

Northeastern Computer Science Mentoring Organization

Boston, MA

President

February 2024 – Present

- Designed and deployed a real-time application using Socket.IO, Node.js, React, and React Native for a submission and voting system for a hackathon ideation event.
- Increase organizational visibility by delivering communications to 1000+ students and campus-wide promotional activities, improving club engagement by 750% within 6 months.

Projects

Wardrobe Wizard | React, Node.js, HTML, CSS, JavaScript, Supabase

January 2025

A full-stack web application that virtualizes and curates your wardrobe

- Developed a database to store a user inputted wardrobe items and integrated user authentication and a populated user's wardrobe.
- Engineered a responsive UI with modern styling to provide a seamless user experience across devices.
- Currently researching machine learning-based recommendation algorithms to enhance personalized wardrobe suggestions.

Stock Manager | Java, Java Swing, JUnit, XML

July 2024

A Java application for managing stock portfolios and performance

- Integrated algorithms to manage portfolios, analyze stock trends, track stocks, value, and data persistence via XML.
- Incorporated Alpha Vantage API to retrieve real-time stock data by sending requests to an external financial data API.
- Wrote 150+ tests in JUnit, including unit/integration tests and mock testing for MVC components, ensuring robust functionality.

EduShare Hub | Python, Flask, AppSmith, MySQL, Docker

April 2024

An educational resource sharing web application

- Led a 4-member team to develop an educational resource sharing web app, managing 40+ CRUD operations in a MySQL database for real-time resource management.
- Utilized Docker to containerize Flask applications and MySQL database, ensuring a consistent and isolated environment.