

# Sophia Fu

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## Education

**Northeastern University - Khoury College of Computer Sciences**

Boston, MA

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

*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

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## 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

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## 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.

**NUOVER**

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.
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## 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.