

# Baoren Liu

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📍 Lexington, MA

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## Education

### University of Illinois Urbana-Champaign, IL

B.S. in Mathematics and Computer Science

Sept 2025 – May 2028

### Northeastern University, MA

B.S. in Computer Science

Sept 2024 – May 2025

GPA 3.97/4.00

## Experience

### Intern

Mass General Brigham

June 2024 - Present

Boston, MA

- Integrated the hospital's electronic health record with retrieval augmented generation (RAG) pipeline to identify patients with dementia. Used Python, Ollama, Microsoft Azure, SQL, and LangChain
- Achieved 0.927 F1-score by experimenting with various RAG techniques and large language models
- First author on the research paper. Responsible for writing methods, results, error analysis, and supplementary information

### Researcher

Mass General Hospital

February 2024 - February 2025

Boston, MA

- Proposed a framework for objectively measuring the success of chronic pain treatment through movement data
- Built React Native app to collect accelerometer movement data from patient's phone and used a transformer-based deep learning model to detect changes in patient movement. Used PyTorch

### Project Leader

Lexington Youth STEAM Team

August 2020 – May 2024

Lexington, MA

- Collaborated with the Town Celebration Committee and created a website to host the Patriots' Day virtual event during the COVID-19 pandemic in 2021. Received 200+ event photos from town residents' submissions [More ↗](#)
- Revamped elementary school Parent-Teacher Association website using HTML, CSS, JavaScript, and Bootstrap [More ↗](#)
- Analyzed historical grants and notice trends of the grant needs for Community Endowment of Lexington. A record total of \$57,850 was granted to nonprofits and received the most applications for the 2021 grant cycle. Used Python, Pandas, and NumPy [More ↗](#)
- 400+ hours participation on CS projects to create an impact on the community [Team website ↗](#)

### Teaching Assistant

KTByte

September 2021 - May 2023

Lexington, MA

- Helped students with Java and Processing homework during office hours

## Projects

### Schedule Web App

July 2020 - December 2024

- Developed and launched a successful web app to address my high school's confusing schedule. Sustained and improved the app's functionality annually, ensuring a positive user experience
- 1400 registered users and 900 daily active users at the beginning of each school year
- Made using ReactJS, Material UI, and Firebase. Hosted on Netlify

### Native Android App

June 2019 - August 2022

- Conceptualized and developed a user-friendly note app for Android that enables users to create, edit, and save notes effortlessly.
- Published and distributed to various third-party app stores using Catapult.io under the company name Hover Software. 6.7k downloads worldwide with a consistent user base of 30 daily users

## Skills

**Languages:** Proficient in Java, Python, SQL, HTML, CSS, JavaScript, Kotlin, C++. Fluent in Mandarin and English.

**Tools:** Firebase, Azure, Docker, MySQL, PostgreSQL, ReactJS, NextJS, Pandas, NumPy, PyTorch, LangChain, Android Studio