Baoren Liu

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RoboticReaper

Education

University of Illinois Urbana-Champaign, IL   *Sept 2025 – May 2028*
B.S. in Mathematics and Computer Science   *GPA 3.97/4.00*

Experience

Research Assistant   *January - Present*
James Rehg Lab   Urbana, IL
- Proposed and lead a machine learning project related to multimodal time-series human activity recognition foundational model

Research Intern   *June 2024 - Present*
Mass General Brigham   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 Paper ↗
- Achieved 0.927 F1-score by experimenting with various RAG techniques and large language models
- Co-author on the research paper. Responsible for writing methods, results, error analysis, and supplementary information

Project Leader   *August 2020 – May 2024*
Lexington Youth STEAM Team   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   *September 2021 - May 2023*
KTByte   Lexington, MA
- Helped students with Java and Processing homework during office hours

Projects

RideList   January 2026 - Present
- Launched a comprehensive rideshare-posting and information-searching platform to reduce current communication redundancies in group-chat format when organizing rides near UIUC. Usage is similar to finding plane tickets instead of Uber
- Privacy-first features for student drivers and riders. Currently collaborating with local professional drivers for increased usage
- Made using NextJS, Mantine UI, Google Firebase, Google Cloud SQL, Microsoft Azure

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

Awards

- **1st Place Award** in UIUC's SIGPwny Cybersecurity Club 2025 Fall competition beginner division, and #6/131 in the whole event when ranked against advanced division.   September 21, 2025

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