Mark Li

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Education

Northwestern University   **June 2025 (Anticipated)**
B.S. and M.S. in Computer Science   *Evanston, IL*
B.A. in Music
Coursework: Programming Languages, Scalable Architectures, Distributed Systems, Operating Systems
Organizations: VAK Sustainability Lab, NU Ultimate Frisbee, NU Formula SAE, The Waa-Mu Show

Experience

Shure Inc.   **Jun. 2024 - Mar. 2025**
Applications Software Development Intern   *Niles, IL*

- Design and develop a project health dashboard in Typescript and Angular to monitor testing pipeline statuses
- Implement a GraphQL API to query MongoDB collections and display data in a user-friendly interface
- Automated data processing collection, significantly reducing manual effort and streamlining the process to deliver project insights

Northwestern University   **Sep. 2023 - Present**
Teaching Assistant, Programming Languages (CS321)   *Evanston, IL*

- Mentor a class of over 70 students providing guidance on course concepts and assignments in Racket PLAI
- Facilitated learning by elaborating on course concepts, and conducting regular office hours

Explorate   **Jun. 2023 - Sep. 2023**
Full-Stack Developer   *Evanston, IL*

- Developed a web application to serve as a comprehensive resource hub and intuitive graphical user interface tailored for NGO users
- Engineered and optimized 300+ lines of Go code to build a RESTful API for access to a PostreSQL database
- Designed a responsive user interface in Javascript with VueJS and Tailwind to display information on 25+ NGO opportunities

McCormick School of Engineering, Programming Languages Lab   **Jun. 2022 - June 2024**
Research Assistant   *Evanston, IL*

- Generated 40+ contract statements in Racket to evaluate error-tracing accuracy across various benchmarks
- Enhanced 100+ function definitions by integrating custom modalities to assess and optimize the use of contracts
- Created custom modal functions to improve the contract writing process

Projects

Not Bop-It - *C*

- Developed an original game in C inspired by the classic Bop-It, leveraging the BBC MicroBit and nRF52
- Implemented I2C communication between sensors and the MicroBit to accurately capture user input
- Designed a user-friendly interface to display game instructions and track player scores

Python Redex Model - *Racket, Redex*

- Modeled Python's behavior and operational semantics using the Redex library in Racket
- Implemented reduction rules and mathematical techniques to accurately simulate Python's computational processes

Beeline - *Python, Flask, Remix*

- Developed a web application that identifies and displays next available flights for users affected by cancellations
- Implemented Dijkstra's algorithm in Python to prioritize flights by departure time, deployed with a Flask server
- Leveraged the American Airlines API to retrieve live flight data, presenting information through a dynamic and user-friendly Remix frontend

Professional Skills

Technical: Python, C, C++, Java, Javascript, Typescript, Racket, Golang, React, React Native, HTML, CSS, SQL, NodeJS, VueJS, AngularJS

Languages: English, Mandarin, Spanish