# Ruibin Lin (Ben)

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## Skills

- Programming Languages: Python, Java, JavaScript, C, PHP
- Databases: SQL, PostgreSQL, MySQL, MongoDB
- Web development: HTML, CSS, jQuery, Typescript, React.js, Django, Node.js, REST API, Prisma
- Additional: Deep Learning (PyTorch, NumPy), JSON, HTTP, LaTeX
- Strong communicator with the ability to convey technical concepts clearly and collaborate effectively across teams.
- Adaptable in Agile Environments: Quick to learn and apply new technologies and tools.

## Work Experience

**Full-Stack Developer**                                                                                                   *May-Sep 2023*

*Ministry of Health Government of Ontario          Toronto, ON, Canada*

- Spearheaded the development of a web application for data processing and analysis using the **MERN stack** (MongoDB, Express.js, React, Node.js), resulting in a 30% reduction in data processing time.
- Designed and implemented authentication and user management systems, enhancing security and reducing unauthorized access by 15%.
- Collaborated with a cross-functional team of 6 developers to build a real-time reporting dashboard, reducing report generation time by 25%.
- Optimized backend performance through code refactoring and query optimization, supporting **200+** concurrent users without latency issues.

## Projects

**UHome: Rental Website**                                                                                                    *Oct-Dec 2023*

- Developed a student housing rental website using the **MERN stack** (MongoDB, Express.js, React.js, Node.js), supporting 5000+ users.
- Designed a secure authentication system using **JWT** and **bcrypt**, enabling multiple roles (student, landlord, admin).
- Integrated a real-time forum using **Socket.IO** for user communication, leading to a 30% increase in user engagement.
- Reduced database query time by 50% by implementing advanced **indexing** and **query optimization techniques**.

**Easy Chef: Recipe-Sharing Website**                                                                                       *Sep-Oct 2023*

- Created a user-friendly recipe-sharing platform using **React**, resulting in a 25% increase in user sign-ups during limited open beta.
- Enhanced system performance by 30% through database optimization and refactoring backend code using **Django**.
- Developed key features including user profile management, recipe operations (creation, editing, deletion, and rating), and a shopping list module to improve user engagement and usability.

**Security Enhancement**                                                                                                       *Feb-Apr 2023*

- Analyzed an existing **PHP**-based system to identify critical web vulnerabilities, reducing security risks by 40%.
- Diagnosed and mitigated over 20 security flaws, including **SQL injection** and **XSS** (cross-site scripting).
- Implemented secure coding techniques to remediate vulnerabilities, resulting in a 30% decrease in potential exploit exposure.

**Bach Shell: Custom Shell Implementation**                                                                                   *May-Sep 2022*

- Built a custom shell in C, implementing core functionalities including **argument parsing, file I/O**, and basic shell commands.
- Enhanced user interaction by adding **signal handling** and **scripting support.**
- Extensively tested and debugged the custom shell implementation using **GDB** to ensure reliable performance across diverse use cases.

## Education

***Honors Bachelor of Science – Computer Science***                                                                      *June/2024 Graduated*

*University of Toronto*

Relevant Courses: Software Design (Java), Data Structures and Introduction to Databases (SQL), Programming on the Web (HTML, CSS, JavaScript, Django)