

Xingrui Zhu

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WORK EXPERIENCE

Software Development Engineer -- *AI Financial*

March 2023 – September 2023

- Collaborated with cross-functional teams of over 10+ professionals and led the development of a full-stack application, utilizing **React** for the frontend and **Python/Java** for the backend.
- Developed a robust and dynamic user interface using **React**, **Redux**, and **React Router**, ensuring smooth user experience and responsive design across different devices.
- Leveraged **Azure Kubernetes Service (AKS)** to orchestrate containerized backend **microservices**, ensuring efficient scaling and high availability.
- Utilized **Azure Blob Storage** and **MySQL** for securely storing and serving large datasets used in financial data analysis, improving data access speed and reliability.
- Integrated **Azure Application Insights** for real-time monitoring and diagnostics, ensuring proactive issue identification and resolution.
- Integrated the frontend with multiple microservices, using **Axios** for API requests, ensuring seamless data flow and real-time updates without page reloads.
- Implemented advanced **data visualizations** in the application dashboard using **D3.js** and integrated with React components, aiding users in making informed financial decisions.
- Utilized modern frontend tools such as **Webpack** and **Babel** for bundling and transpiling, respectively. Ensured application compatibility across all major browsers.
- Employed **component-driven development**, building reusable React components, and utilizing **Storybook** for component documentation and **isolated testing**.
- Worked closely with **UX/UI** designers, implementing designs with pixel-perfect accuracy using **styled-components** and **CSS** modules.
- Introduced unit and integration testing for React components using **Jest** and **React Testing Library**, ensuring the frontend's robustness and reliability.
- Set up **continuous deployment** for the frontend application using **Jenkins** for automated build, test, and deployment, while also exploring **Azure DevOps** for future improvements.
- Led frontend **code reviews**, promoting best practices and ensuring that the team adhered to coding standards and patterns.
- Trained 5+ team members on React best practices and advanced features like **hooks**, **context**, and **lazy loading**, leading to a 25% faster development cycle.
- Actively collaborated with backend developers to define **RESTful API** contracts and ensure efficient data retrieval and posting.
- Stayed updated with the latest advancements in **React and JavaScript ecosystem**, participating in 4+ React-focused seminars and workshops, ensuring the application remained modern and performant.

PERSONAL PROJECTS

Distributed E-commerce System

January 2023 – April 2023

- Managed and led the E-commerce system project in collaboration with 7 team members as a front-end technical leader, built a scalable and responsive distributed commercial system.
- Crafted the front-end utilizing the **React** framework in **JavaScript** ES6, adapting advanced **Hook API** and adhering to the **SPA**(single page application) principle.
- Devised and executed **load-balancer** algorithms to effectively manage distributed servers.
- Designed and implemented 20+ **Restful** database API to transfer **JSON** objects for front-end/back-end communication.
- Communicated and collaborated across multiple teams to optimize and manage database structure using **SQL** that minimizes the coupling of database relationships.
- Diagnosed and fixed issues by using **Postman** to verify back-end distributed server functionality.

and simulate high demand requests for stress testing.

- Improved user interface experience using Chrome **DevTools** by fixing 10+ functionality issues and accelerating GUI runtime speed by ~ 2 times.
- Using **React-Bootstrap** for component-based **CSS** style development.

Multi-user Online Draw Board

September 2022 – January 2023

- Spearheaded and guided a team of 6 members as a project manager on building the project.
- Designed and implemented a highly scalable **SQLite** database optimized for concurrent user sessions, with an efficient schema and indexing strategy, providing **RESTful API**.
- Utilized **Websocket** for reliable real-time communication between clients and the server.
- Adapt **Flex and Grid** layout design to design the **mobile-friendly** application using media queries.

SKILLS

- **Programming Languages:**
 - Python, Java, C#, C++, JavaScript, SQL, TypeScript, HTML, CSS, Haskell, Prolog, R
- **Web Development:**
 - Front-End: React, jQuery, Material UI
 - Back-End: Django, Node.js
 - Frameworks: WPF (Windows Presentation Foundation)
- **DevOps & Cloud Services:**
 - Cloud Platforms: Azure (Azure Kubernetes Service, Azure Blob Storage, Azure DevOps, Azure Application Insights)
 - Containerization: Docker
 - Continuous Integration/Continuous Deployment: Jenkins, GitHub Actions
- **Software Development Tools:**
 - Version Control: Git (GitHub, GitLab)
 - Operating Systems: Linux, Windows
 - API Testing: Postman
 - Unit Testing: JUnit (for Java), pytest (for Python)
- **Database Management:**
 - Relational Databases: MySQL, PostgreSQL
 - NoSQL Databases: MongoDB
- **Data Analysis & Machine Learning:**
 - Data Processing: Pandas (Python)
 - Machine Learning Libraries: Scikit-learn (Python)
 - Data Visualization: PowerBI, Tableau, Excel

EDUCATION

- **University of Calgary**
- **Bachelor of Science, Major in Computer Science** Sept 2018 – Jan 2023
- **Dean's List Award** (GPA 3.5 / 4.0)
- **Related Courses:** Web-based System, Machine Learning, Database Design and Management, Data Structure and Algorithm, Computer Network Security, Operating System, Statistic.