Simon Zhou

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SKILLS

Languages: Java, JavaScript, Typescript, C, C++, Python, PHP, HTML, CSS, SQL
Frameworks: React.js, NodeJS, Next.js, NestJS, Symfony, Bootstrap, Express
Tools: Git, Docker, JetBrains, Visual Studio Code

WORK EXPERIENCE

Software Developer Co-op   May. 2024 – Present
Global Relay

- Contributed towards the development of a distributed message compliance software using Java, Kafka, Cassandra, and Docker, used by over 20,000 customers daily, to archive 1 TB messages/day
- Improved code infrastructure and scalability by developing a on-disk cache to reduce the load of RPC calls between services storing intangible data as compressed bytes and securing data with AES-256-GCM encryption
- Developed a Fabric deployment script for a microservice, enabling developers to deploy builds to test and production environments
- Improved the build pipeline on Jenkins by integrating automated formatting checks and implementing logging for flaky tests, enhancing build reliability and debugging efficiency

Junior Software Developer Co-op   Jan. 2022 – Jun. 2022
St. George's School

- Contributed to the transition of a legacy codebase to a full-stack school portal web application using Symfony, JQuery, and Javascript, improving scalability and loading times which caters to more than 1,000 students and faculty members
- Worked with PHP and MySQL to identify security vulnerability such as SQL injection by sanitizing incoming user inputs
- Maintained the functionality of management and reporting systems through the application of industry best practices and the implementation of object-oriented principles
- Improved reliability and robustness of the codebase by leveraging PHPUnit to devise integration and unit tests

PROJECTS

Distributed Minecraft Server   Sep. 2023 – Dec. 2023

- Collaborated with one developer to create an automated distributed server in Typescript, facilitating the hosting of servers and the transfer of hosting privileges to another machine in case of failures
- Implemented distributed system concepts, including Replication, Raft Consensus, and heartbeat detection, to effectively manage failures and efficiently transfer leader ownership
- Designed a user-friendly GUI using React and Electron to simplify the process of connecting to and accessing networks
- Produced a comprehensive design report outlining optimized implementation strategies, resulting in a 30% reduction in potential technical debt and accelerated development timeline by 1 week

Messaging Application   Jun. 2023 – Sep. 2023

- Developed a real-time messaging platform using contemporary web technologies including Next.js, and Socket.io, to deliver users an interactive messaging experience
- Built a resilient and flexible backend infrastructure with Nestjs and Docker, adhering to RESTful design principles to facilitate user authentication, message retrieval, and user profile management
- Incorporated passport-local and express-session to oversee user sessions, user authentication, and protected routes

Pokemon Wikipedia   Sep. 2022 – Nov. 2022

- Created a full-stack web application using PostgreSQL, Flask, and Vue.js in a group of three that displays a series of information for the game Pokemon whilst allowing users to create custom profiles to store data
- Minimized redundancy by applying normalization to database information and creating REST API calls to fetch data from database

EDUCATION

University of British Columbia - Vancouver, BC   Sep. 2020 – Dec. 2024
Bachelor of Science in Computer Science – 3.8 GPA