Karina Yichen Sang

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Skills

- Languages: Java, JavaScript, Python, C/C++, HTML5, CSS, R, SQL, Kotlin, Go, Swift, Bash
- Frameworks: Spring/Spring Boot, React Native, Feathers.js, RabbitMQ, jQuery, Marionette, React
- Tools: Docker, MySQL, MongoDB, Maven, Gradle, Bazel, AWS EC2/SQS, Heroku, Firebase, Puppet

Experiences

Allstate, Software Engineer Intern   *Sept. 2022 – Dec. 2022*

- Developed a microservice from scratch to fetch and validate data on insurance policies, utilizing timestamp validation to update policy status and ensure policies are current and valid
- Standardized authentication process and ensured unit test coverage for over 10 microservices
- Collaborated with external teams for analyzing Splunk logs to monitor health and performance of microservices

Axonify, Software Engineer Intern   *May 2022 – Aug. 2022*

- Implemented a QR code generator for webpage articles, utilizing EasyQRCodeJS and deep linking to optimize user experience and functionality
- Designed a marker-based AR tool using AR.js to select quiz answers with phone camera in real time
- Developed new modals and resolved visual bugs using Marionette.js

Axonify, Software Engineer Intern   *Sept. 2021 – Dec. 2021*

- Implemented PDF export functionality for over 20 reports of varying types, utilizing DTOs to facilitate data transfer between system components
- Optimized SQL queries to improve report generation speed by retrieving report data based on column names

Thoughtwire, Software Engineer Intern   *Jan. 2021 – Apr. 2021*

- Developed user calendar information retrieval endpoints using RESTful requests to Google Calendar and Microsoft Graph API, and implemented data parsing functionality

XE, Software Engineer Intern   *Sept. 2019 – Dec. 2019*

- Implemented a messaging queue with RabbitMQ to reduce latency on local API event communication

Projects

UniConnect   2023

- Designed and implemented a React Native mobile social media application, utilizing MongoDB and Feathers.js for backend support and OpenAI for chatbot functionality
- The app uses geo-location data to suggest nearby study groups, and allows users to create or join these groups in real-time

The Rush Hour Puzzle Solver   2021

- Designed and implemented an advanced heuristic function and A* search algorithm in Python to solve the Rush Hour puzzle

The Grid World Solver   2021

- Implemented the adaptive dynamic programming algorithm to train a reinforcement learning model to determine the optimal policy for solving the grid world problem

Education

Bachelor of Computer Science   GPA: 3.9   **University of Waterloo**   Expected Graduation: April 2023

- Relevant Courses: Data Structure & Algorithm, Operating System, Introduction to Artificial Intelligence, Software Design and Architecture, Human-Computer Interaction, Software Requirements Specification and Analysis Software Delivery