Jason Zhang

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SKILLS

Languages: TypeScript / JavaScript, Java, Python, C++, C, Elixir, SQL, HTML / CSS
Technologies: Git, React, Node.js, Spring Boot, MongoDB, PostgreSQL, Flask, Firebase, Phoenix, GraphQL, gRPC
Tools: Docker, Kubernetes, AWS, Google Cloud, Kafka, Redis, Grafana, Prometheus, GitLab CI/CD, Jenkins, Datadog, Splunk, Postman

EXPERIENCE

Backend Software Engineer   (Co-op) Sep 2022 - Dec 2022
theScore

- Achieved **1st place** in company-wide intern product pitch challenge by defining a community engagement app feature, scoping the technical requirements, and presenting the proposal plan to **20+** managers and executives.
- Optimized database queries in **GraphQL** through data loaders, resulting in an average request time reduction from 1800 ms to 300 ms using the **Apollo Client.**
- Wrote a real-time stream processing microservice to store Kafka messages into Amazon S3 using **ElastiCache for Redis** with a throughput of **10k messages/second**.
- Developed a fraud prevention component to verify the geolocation of **4+ million** users to comply with regulatory requirements.
- Utilized monitoring tools such as **Datadog** and **Splunk** to accurately investigate and troubleshoot issues in production environments.

Backend Software Engineer   (Co-op) Jan 2022 - Apr 2022
Loblaw Digital

- Engineered services for the cart platform including catalogue API requests, validation features and pricing engine workflows by leveraging the functional programming paradigm and **MVC design pattern** with **Elixir** and **Java Spring Boot.**
- Independently planned and implemented a **metrics monitoring** system employed by team with **Prometheus**, delivering time-series data to capture network performance and identify inefficiencies.
- Refactored existing infrastructure to streamline web performance for large cart traffic and reduced **checkout latency by 10%.**

Full-Stack Software Developer   (Part-time) May 2021 - Sep 2021
Phyxable

- Architected major UI overhauls for online physio platform by using **MongoDB, Express, React, Node** and integrating third-party APIs.
- Directly communicated and contributed ideas with the product manager and designers to ensure product met user requirements.

PROJECTS

Detective Duck (Winner of Hack the 6ix Hackathon)   Link

- Created a real-time phishing detection application that prevents targeted children from clicking malicious links on the web.
- Preprocessed dataset to train the linear regression-based machine learning model and deployed it on **Google Cloud**.
- Utilized **Selenium** to scrape web link information, and designed a responsive, user-friendly GUI object based on mouse and keyboard detection using the **PyAutoGUI** library.

Program Class Profile   Link

- Spearheaded a team of 7 members to launch a web app implemented with **React**, **Firebase,** and **Chart.Js** for an audience of over **80,000** people and **120+** daily users

VizualDB Terminal   Link

- Engineered a visualizing command-line tool to aid programmers in solving data structure and algorithmic problems.
- Leveraged various **Python** modules to create a debugging tracer and access variable information stored by interpreter.
- Designed the terminal interface and implemented dynamic visual cues of data structures such as linked lists and binary trees.

EDUCATION

University of Waterloo   Sep 2020 - Present
BASc Candidate for Systems Design Engineering, Minor in Computing

- GPA: 4.0 (94.1%)
- Certifications: AWS Certified Cloud Practitioner, Meta Back-End Developer Certificate, Udemy Data Science & Machine Learning
- Relevant Courses: Data Structures & Algorithms (C++), Computer Programming (Java), Digital Computation (C++, Python)
- Design Teams: UW Blueprint (Project Developer), Industry 4.0 (Director of Public Relations), Waterloop (Backend Developer)