

Jason Zhang

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SKILLS

Languages: JavaScript / Typescript, 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 - *theScore*

(Co-op) Sep 2022 - Dec 2022

- Achieved **1st** in company product pitch challenge by defining a community engagement app feature, scoping the technical requirements and software architecture, and presenting the proposal plan to **20+** managers and executives.
- Integrated a real-time stream processing microservice to store **Kafka** messages into Amazon S3 using **ElastiCache for Redis** with a throughput of **8k 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 - *Loblaw Digital*

(Co-op) Jan 2022 - Apr 2022

- 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 **10-member** team using **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 - *Phyxxable*

(Part-time) May 2021 - Sep 2021

- Architected major UI overhauls for online physio platform 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.

Data Analyst - *University of Waterloo Graduate Studies*

(Co-op) Apr 2021 - Aug 2021

- Delivered numerous **Power BI** dashboard reports to communicate insights and metrics needed to guide critical admission decisions.
- Wrote **Python pandas** scripts and **VBA** macros to automate **ETL** procedures in Excel, saving **30+ hours** manually per monthly basis.
- Spearheaded survey distribution and data analysis project gathered from a sample size of more than **5000** accepted applicants.

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 datasets 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.

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 utilize variable information stored by the interpreter.
- Designed the terminal interface and implemented dynamic visual cues of data structures such as linked lists and binary trees.

Falling Fruit

[Link](#)

- Volunteering for the non-profit Falling Fruit project as a Data Engineer, to compile urban tree inventories into a single harmonized geospatial dataset for urban landscape research and individual foraging.

EDUCATION

University of Waterloo

Sep 2020 - Apr 2024

BCS Candidate for Computer Science

- Certifications:** AWS Certified Cloud Practitioner, Meta Back-End Developer Certificate
- Relevant Courses:** Object-Oriented Programming (C++), Data Structures & Algorithms (C++), Digital Computation (C++, Python)
- Design Teams:** Develop for Good (Data Engineer), Waterloo (Internal Tools Web Developer)