Jason Zhang

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Education

University of Toronto   Sep 2020 — Apr 2025
Bachelor of Applied Sciences in Computer Engineering   *Toronto, ON*
Relevant Courses: Distributed Systems, Operating Systems, Data Structures and Algo, Computer Networks

Skills

Languages: C/C++, Go, Java, Python, JavaScript, ARM Assembly, Verilog, SQL
Technologies: Kubernetes, Docker, Ginkgo, Spark, React, Tailwind, Node.js, Git

Experiences

Software Engineering Intern   May 2023 — Present
Red Hat   *Toronto, ON*
- Cloud engineering for Advanced Cluster Management Governance team, working to enable centralized control and enforcement of policies across K8s clusters for compliance, security, and resource optimization.
- Extended Kubernetes by implementing a controller that periodically reconciles custom policy resources to streamline Kubernetes Operator installations on managed clusters
- Pitched and developed a feature to support the end-to-end integration of a policy override command that provides 50% greater flexibility for cluster admins when configuring policies
- Collaborated across functional teams to deliver solutions for high priority customer cases and vulnerabilities

Data Science and Engineering Intern   May 2022 — Aug 2022
HSBC   *Toronto, ON*
- Engineered a framework for HSBC to streamline the identification of overlapping data points across hundreds of different investment criteria, resulting in an overall increase in workflow efficiency
- Developed a general-use scoring methodology for converting vendor controversy data to a controversy score for tens of thousands of HSBC-affiliated companies
- Created data visualizations using Seaborn for a white paper documenting research and analysis
- Debugged data pipelines and a proprietary entity-resolution engine hosted on the Hadoop cluster

Projects

Mappr | Course Project | *C++, OpenStreetMap API, GTK, Git*   Apr 2022
- Developed a Geographic Information System using the **OpenStreetMap API** and **GTK** toolkit
- Implemented **Dijkstra's** and **A*** algorithms as well as multi-threading to optimize responsiveness of software when user queries for map directions using the GUI

NFTracker | Demo | GitHub | *React, Node.js, JavaScript, Firebase*   Jan 2022
- Integrated the **OpenSea API** to displays a gallery of NFTs and their prices added by the user for price tracking and bookkeeping purposes
- Used **Firestore Database** to handle stores and deletes of NFTs added by the user
- Utilized custom hooks, reducers, and context to facilitate user authentication and requests to the database

Zenmo | Devpost | GitHub | *React, Node.js, JavaScript, Auth0, HTML/CSS, Bootstrap*   Nov 2021
- Designed the frontend of a web app that allows users to set up "focus sessions" to promote productivity