Zian Zhou

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Computer Engineering graduate from the University of Toronto. Skilled in software development and DevOps.

Work Experience

Software Developer CoopBlueCat NetworksSep 2022—Sep 2023Backend teamToronto, Canada

- Collaborated with a team of developers to implement backend features for software components that act as clients and servers for the company's internal tools, resulting in a 20% increase in system efficiency.
- Redesigned a system to send retry requests with exponential backoff using Micronaut during server failure. Tested by creating unit and component tests to verify HTTP response codes, leading to 10% faster response times.
- Integrated Blackduck and Coverity into required projects to maintain the quality of the codebase, increasing coverage from 0% to 80%. Documented specific use cases to increase the adoption rate by 20%.
- Created Grafana dashboards with Prometheus and AWS Elasticsearch to monitor infrastructure stability.
- Automated dependency updates for every backend repository by researching and utilizing RenovateBot.
- Hooked up alerts for build pipelines to a slack channel which notifies the team about pipeline failures.
- Contributed to testing a natural language processing model to improve its accuracy, precision, and recall.

DevOps Intern Coinsquare May 2022—Aug 2022

DevOps team Toronto, Canada

- Managed cloud infrastructure and Kubernetes clusters to simplify technical processes.
- Created Grafana dashboards using Prometheus for monitoring and reporting purposes.
- Implemented user feedback into application updates and deployments, improving customer satisfaction by 15%.
- Automated weekly branch merges across 20+ core repositories using a custom Python script, reducing merge time by 85% and eliminating 95% of manual conflicts, significantly boosting CI/CD efficiency.
- Assisted developers with quality assurance by deploying applications to the testing environment using ArgoCD.

Education

• Master of Engineering, University of Toronto, Canada.

Sep 2024-Sep 2025

BASc. Computer Engineering, University of Toronto, Canada.

Sep 2019-May 2024

- o Major: Bachelor of Applied Science in Computer Engineering with Honours, GPA 3.50
- o Minor in Engineering Business and Certificate in Engineering Leadership

Technical Skills

Languages: C, C++, Python, Java, HTML, CSS, JavaScript, Rust, Go, SQL, Matlab

Technologies: React, MySQL, Postgres, AWS, GCP, Git, PyTorch, TensorFlow, Keras, Pandas, Docker
Other: Bash scripting, Terraform, Kubernetes, ELK Stack, Prometheus, Grafana, ArgoCD, Gitlab

Projects

- AI Model Partitioning: Developed a pipeline to partition a ResNet model into multiple submodels, lower the submodels to MLIR's intermediate representations, and run the lowered subgraphs sequentially on hardware.
 - o Developed two partitioning algorithms to make valid cuts on a graph based on topological sort.
 - o Engineered the host program to schedule the device to run subgraphs sequentially on hardware with CUDA.
- Interactive Map: Created a Geographic Information System Mapping App by extracting data from the OSM database
 - o Built a GUI with the ezgl library to enable user input and improved interaction with the application.
 - o Implemented Dijkstra's Algorithm with heuristics to find the shortest path between intersections.
 - Navigated the traveling salesman problem using the greedy algorithm approach with parallelization.