Ben Lin

Honours Bachelor of Computer Science Graduate
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Languages: Python, C, C++, SQL, Java, Kotlin, Go, JavaScript, TypeScript, HTML, CSS, Bash, Racket
Technologies: Kubernetes, React, Android, Bazel, Linux, Git, Docker, TensorFlow, PyTorch, NumPy, Linear Programming

Work Experience

Shakudo Inc., Toronto, Ontario — May 2023 - August 2023
Backend Software Engineer

- Streamlined and standardized the process for package updates within Python environments, leading to increased developer productivity and customer satisfaction
- Architected new API and VS Code, Jupyter Server extensions for monitoring user activity in order to conserve computational resources, leading to a 30% decrease in resource usage
- Developed the user-facing API for resource allocation in Kubernetes pod creation

Royal Canadian Air Force, Kitchener, Ontario — September 2022 - December 2022
Full Stack Developer

- Designed and implemented interactive features on a multiplatform app, improving user experience for aircraft technicians
- Developed, tested, deployed, and improved upon critical features using Golang, GORM, GoFiber, PostgreSQL, Javascript, JQuery, HTML and Bootstrap
- Streamlined a process for data visualization, creating new API using SQL queries

Nuro Technologies Inc., Mountain View, California — January 2022 - April 2022
Software Engineer

- Implemented tooling to track and visualize memory usage and program execution using C++, Python and shell scripting, increasing engineer efficiency and productivity
- Automated the collection of resource usage statistics for system processes, facilitating the comparison of performance metrics when testing changes
- Used statistical testing to examine the impact of performance critical changes on end to end latency

Huawei Technologies Canada, Markham, Ontario — May 2021 - August 2021
Compiler Software Engineer

- Developed Python scripts for graph comparison, facilitating the debugging of GPU assembly instructions
- Implemented compiler optimizations in C++ removing redundant instructions in assembly code
- Produced basic shader code to compare correctness of different GPU compiler patches

Education

Honours Bachelor of Computer Science, Combinatorics and Optimization Minor — 2019 - 2024
University of Waterloo, Waterloo, Ontario

- Faculty GPA: 89.83 (3.9)
- Dean's Honours List, Excellent Standing, President's Scholarship of Distinction
- Algorithms, Data Structures, User Interfaces, Operating Systems, Artificial Intelligence, Machine Learning, Cryptography, Computational Vision, Game Theory, Computer Networks, Stochastic Processes, Optimization

Projects

Class Activation Mapping for Object Detection — 2024

- Computer Vision - Extraction of a "heat map" for locating an object in an image
- Using the convolutional layers of an image recognition model to determine the location information of different features in the image, we take a weighted sum of these features to determine an approximate location of the object in the image