

Angel Zhang

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Skills

Languages C/C++, Python, JavaScript/TypeScript, HTML, CSS/Sass, Bash, SQL, R

Tools & Frameworks Linux, Git, Jenkins, Docker, LLVM/MLIR, ONNX, React, Angular, Node.js

Experience

AI Compiler Engineer

Markham, ON

ADVANCED MICRO DEVICES (AMD)

May. 2024 – Aug. 2024

- Work on an open source AI compiler stack, focusing on GPU code generation

CG Pipeline Software Developer

Toronto, ON

SIDEFX SOFTWARE

Sept. 2023 – Dec. 2023

- Leveraged multithreading in **C++** to optimize the data retrieval methods in Houdini Engine, resulting in a **67%** reduction in client-server data transfer costs and significantly enhancing overall efficiency
- Expanded the functionality of Houdini's Task Operator by developing new features in **Python**, providing users with more flexible options for generating streamlined CG workflows
- Identified and resolved a memory issue in Houdini Engine by modifying a code generation script containing incompatible data types, reducing memory usage by **50%**

Compiler & Infrastructure Engineer

Markham, ON

HUAWEI TECHNOLOGIES CANADA CO., LTD.

Jan. 2023 – Apr. 2023

- Streamlined compiler tuning processes and facilitated the exploration of optimization opportunities in multiple benchmarks using **Python** and **Shell scripts**
- Implemented a CI workflow using **Jenkins** for major development branches to ensure a seamless merging process with the main branch
- Created a test suite using **LLVM lit** to replace outdated tests, resulting in a **75%** reduction in testing time

Compiler Software Engineer

Markham, ON

HUAWEI TECHNOLOGIES CANADA CO., LTD.

May. 2022 – Aug. 2022

- Developed an interface in **C++** and **Python** to connect LLVM with a machine learning framework, enabling seamless interaction between the two parties
- Refactored and optimized existing **Python** scripts, leading to a **93%** reduction in the compilation time of various benchmarks when the ML-enabled compiler is used
- Created a code feature extractor in **C++** and generated a dataset of **5000+** entries for training ML models

IT Support Specialist

Waterloo, ON

TANGAM SYSTEMS

Sept. 2021 – Dec. 2021

- Designed and developed a **full-stack web application** using **Angular**, **TypeScript**, **Sass**, and **Node.js** from scratch, serving as the company's new IT support request platform

Projects

World Cups Database

JAVA, JDBC, SQL

- Collaborated with three other students to develop an application with a command-line interface in **Java**
- Employed an **SQL database**, designed **database schema** and wrote **SQL queries** to store and retrieve data

Board Game

C++

- Developed a multiplayer command-line based board game inspired by The Settlers of Catan with two other students
- Employed various **OOP principles** such as **abstraction** and **encapsulation**, and utilized the **MVC design pattern**

Education

University of Waterloo

Waterloo, ON

BACHELOR OF COMPUTER SCIENCE (CO-OP)

Sept. 2020 – Present

- **Cumulative Average:** 93%
- **Relevant Coursework:** Artificial Intelligence, Distributed Systems, Computer Architecture, Computer Networks, Computer Security and Privacy, Applied Cryptography, Database Management