Simhon Chourasia

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Education

University of Waterloo Sep. 2020 – May 2025

Bachelor of Computer Science - Honours with Co-op

- Relevant coursework: Object-Oriented Software Development, Data Structures and Data Management, Algorithms, Operating Systems, Statistics, Computer Design, Advanced Functional Programming
- GPA: **3.99** (**94.4%** cumulative)

Experience

Intel Sep. 2022 – Dec. 2022

FPGA Compiler Software Engineer *Toronto, ON*

- Proposed, presented, and implemented modifications to router flow saving **7.4%** of FPGA router time on representative CPU emulation designs and decreasing runtime by up to **44%** on client designs
- Created a new **C++** framework to allow developers to easily add new FPGA families to the routing flow, significantly reducing workload for testing and supporting routing next-generation FPGA chips
- Wrote **Python** scripts to analyze millions of lines of FPGA compilation data, created visualizations using **matplotlib**, and investigated runtime profiles to propose ways to save compilation runtime

Wish Jan. 2022 – Apr. 2022

Software Engineer - Product Web *Toronto, ON*

- Overhauled localization flow to support asynchronous updates in **Go** globalization microservice using **AWS** SQS and automatically check localization requests, reducing impact of Docker container failures and eliminating over **11.6%** of translation issues
- Developed currency localization **gRPC API** and admin tool with **Python**, **React**, **Node**, **MongoDB**

Huawei Technologies Canada May 2021 – Aug. 2021

Big Data Platform Developer *Toronto, ON*

- Led development and engineered processes for internal and external users to add new functions to SQL engine backend using LLVM in **C++**, saving over **90%** of function runtime
- Designed and implemented features in **C++** and **Java** to connect the OpenLooKeng SQL engine to other databases by sending queries in JSON format, allowing for increased query processing speed by over **30%** compared to previous solution

Projects

Album Inspiration | *Python, Flask, React, TensorFlow* |

- Created a generative adversarial network to generate album art and a recurrent neural network to generate song titles in **Python** using **TensorFlow**, **NumPy** and **Matplotlib**
- Developed a web app using **React** and **Flask** to use the models to generate sample album tracklists

TFuse: Tweet Sentiment Analyzer | *Python, TensorFlow, NumPy, pandas, Matplotlib* |

- Built an NLP model with **TensorFlow** and Google's Universal Sentence Encoder in Python to perform sentiment analysis on a dataset of 1 million tweets using CNN, GRU, and LSTM models
- Won 2nd place overall at Ignition Hacks 2020

Technical Skills

Languages: Python, C++, C, Java, Go, JavaScript, SQL, HTML/CSS, R, Scheme
Tools and Frameworks: React, Node, MongoDB, Express, Git, GCP, AWS, Docker
Data Science and Machine Learning: TensorFlow, scikit-learn, Matplotlib, NumPy, pandas