Matthew May

Computer Science | University of Waterloo

+44 752 376 0291 mjcmay@uwaterloo.ca /matthewjmay /mjcmay

Skills

Languages: C++, Python, Go, C, SQL, JavaScript, Bash

Tools and Frameworks: Kafka, Hive, Airflow, Keras, Pandas, NumPy, Neo4j, Bazel, Git

Experience

Citadel Securities — Software Engineer, Systematic Trading Technology **Summer 2019**

- Implemented a distributed, fault tolerant, and scalable real-time order reporting system with exactly-once delivery semantics by leveraging Apache Kafka
- Increased single partition throughput by 400% by creating a benchmarking framework to identify bottlenecks, and implementing optimizations such as batching, using reader-writer locks, and reducing memory copies

University of Waterloo — Research Assistant, Advisor: Semih Salihoglu **Winter 2019**

- Developed a multithreaded graph algorithm in C++14 to enumerate maximal cliques in a graph
- Implemented dynamic thread load balancing by storing search subtree nodes on a shared thread-safe stack

Wish — Data and Relevance Engineer, Search and Recommendation Team **Fall 2018**

- Improved product quality by finding popular merchandise substitutes using k-nearest neighbour search in product embedding vector space
- Reduced product exploration latency by over 25ms, by parallelizing Solr search queries using a Go microservice

Wish — Software Engineer, Product Web Team **Winter 2018**

- Reduced Wish's desktop website average time to DOM interactive by over 25% by rewriting key pages in React and Redux, and implementing features such as service worker caching, code splitting, and lazy loading

DF/Net Software ULC — Software Developer **Summer 2017**

- Implemented customizable web-based and XLSX reports using C++, Qt5, and d3.js

Personal Projects

Basic Compiler and Assembler — C++, MIPS assembly

- Built a compiler capable of compiling a subset of C into MIPS assembly

Insincere Questions Classifier — Keras, Pandas, NumPy

- Developed a model to identify misleading questions by ensembling CNNs and LSTMs
- Improved F1 score by leveraging multiple source word embeddings to create meta-embeddings

Sketchy — Node.js, Express, Firebase **Hack the North 2017**

- Won *Best use of Cymon API* award for building a Chrome extension which detects malicious social media links

Education

University of Waterloo, Candidate for Bachelor of Computer Science **2016-2021**

- 3.99 GPA, Dean's Honours List (all terms)
- Relevant courses: Algorithms, Data Structures and Data Management, Operating Systems