Matthew May

Computer Science | University of Waterloo

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Skills

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

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

Experience

Facebook — Software Engineer Intern　　　　　　　　　　　　　　　　**Winter 2020**
- Upcoming internship from January 2020 - April 2020

Citadel Securities — Software Engineer Intern, 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 Intern, 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 Intern, 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

Personal Projects

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

Basic Compiler and Assembler — C++, MIPS assembly
- Built a compiler capable of compiling a subset of C into MIPS assembly

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