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HAVIN LEUNG

Skills Summary

- **Languages**: Java, Python, C++, JavaScript, HTML and CSS
- **Technologies**: Android, FlumeJava, Guice, Pubsub, JUnit, MongoDB, Tornado, Flask, ReactJS

Work Experience

Google
Mountain View, CA
Software Engineer Intern
May 2019 – Aug 2019

- Designed and wrote a parallelized web crawling and data processing pipeline from start to finish
- Increased return policy change detection precision by ~320%, decreasing cost by up to ~77%
- Implemented the publish-subscribe pattern to decouple pipelines, increasing code quality
- Designed and wrote modular code used with Guice to increase code reuse, quality, and testability

Wish (ContextLogic)
San Francisco, CA
Software Engineer Intern
Sep 2018 – Dec 2018

- Worked on the Wish Android app and the Tornado/MongoDB backend, serving 500M+ users
- Created a feature that allows users to vote for products and get discounts on the top 25 per category
- Designed and led the development of a feature that allows users to check the demand of a product
- Iterated on the signup experience to gain the trust of new users (+2% GMV, +3% profit for new users)
- Modified coupon code logic to support setting maximum discounts on random subsets of products

TD Lab
Waterloo, ON
Software Engineer Intern
Sep – Dec 2017

- Created a chatbot style web app that guides users through post-secondary financial planning
- Implemented a conversation timeline and pinning/viewing of messages for simpler navigation
- Increased code quality and facilitated code reuse/modification by refactoring ReactJS codebase

Projects

My Database [Java]
Sep 2019 – present

- Building a small relational DBMS as well as a Domain Specific Language and a REPL client
- Implementing conditional select statements, table joins, and other common database functions

WLM Compiler [C++]
Mar – Apr 2018

- Created a compiler (for a subset of C) that outputs MIPS assembly language instructions
- Implemented functions for dynamic memory allocation (malloc/free) and general I/O (put/getchar)

MIPS Development Kit [C++, Python]
Mar 2018

- Created a MIPS emulator that supports setting breakpoints and step-by-step execution for debugging
- Created a MIPS assembler (in C++) by tokenizing inputs using a prefix matching algorithm

Face Matcher [Java, Android, Python, MongoDB]
Nov 2017

- Built a proof of concept app to match user's face to database of celebrities using Google Vision API
- Implemented a RESTful API using Flask and MongoDB, and then deployed using Heroku

MyGraph Library [Java]
Oct 2017

- Implemented a connectivity checking algorithm and Prim's algorithm to create a Min. Spanning Tree

Education

University of Waterloo
Waterloo, ON
Bachelor of Computer Science
Sep 2016 – Present

- First in Class Engineering Scholarship, President's Scholarship
- Term Dean's List (5 terms), 94.3% Major Average, and 3.96 Cumulative GPA
- Coursework: Computer Security, Networks, Algorithms, Operating Systems, Numerical Methods

Interests

Rugby ● Badminton ● Guitar ● Most foods ● Foreign cultures ● Photography ● Helping the homeless