Linda Zheng

SOFTWARE ENGINEERING STUDENT

linda.zheng1@uwaterloo.ca github.com/thelindazheng linkedin.com/in/thelindazheng

SKILLS SUMMARY

Languages: Python, Go, C/C++, SQL, Scala, Java, JavaScript, HTML, CSS, Matlab

Tools: Hive/Presto, Elasticsearch, Flask, Node.js, Tensorflow, Airflow, AWS S3, Grafana/Prometheus, MongoDB

WORK EXPERIENCE

Shopify
September 2020 – December 2020

Data Science Intern *Ottawa, ON*

- Prototyped a search engine using Elasticsearch with a Python REST API, projecting a 10% traffic reduction to live chat
- Optimized helpdesk workflow by using Naïve Bayes to classify chats and route users to the appropriate support team
- Revised Kafka eventing and built a dashboard using SQL and Mode Analytics to monitor search performance
- Configured JSON-formatted logging for Flask/uWSGI/nginx app with Splunk integration

Wish – Context Logic
January 2020 – April 2020

Data & Relevancy Engineering Intern *San Francisco, CA*

- Developed and tuned a product embedding model using GraphSAGE and Tensorflow for graphs with 7+ million nodes
- Built a GraphSAGE embedding pipeline for a Go recommendations microservice, improving click-through rate by 30%
- Optimized random walk for web-scale graphs using an early stopping algorithm, reducing latency from 32 to 6 ms
- Designed and implemented an Airflow pipeline to generate daily click attribution reports

Wish – Context Logic
May 2019 – August 2019

Software Engineering Intern *Toronto, ON*

- Developed keyword extraction to simplify user queries using word2vec techniques, increasing impressions by 5%
- Tuned recommendations by adding Solr boosts to product fields stored in MongoDB, increasing GMV by $20k/day
- Launched A/B tests and analysed the results using HiveQL and Presto in Treasure Data
- Built a Python package to cross-check Solr atomic updates with S3 data and refactored libraries for Solr re-indexing

PROJECTS

Multiplayer Online Tetris

A multiplayer Tetris game where you can compete against friends in real-time online rooms

- Connected players via WebSocket connections to a Node.js server deployed on Heroku
- Used MVC and Factory design patterns to ensure code flexibility and robustness

Cloud Optical Spectrum Analyzer

A web app that allows you to view and control laboratory equipment such as optical spectrum analyzers

- Constructed interactive plots with 28k+ data points at a refresh rate of 1Hz using canvasJS
- Fetched real-time data from measuring devices using PyVISA through Ajax calls to a Flask server

Scala Compiler

A compiler that parses a subset of the Scala grammar into MIPS instructions

- Implemented nested procedures, closures, CYK parsing, type checking and Cheney's garbage collection

ACHIEVEMENTS

- TreeHacks Sustainable Energy Winner
- SheHacks III Best Hackathon Design
- 2x MIT Math Prize for Girls Qualifier
- Machine Learning Certificate, Coursera MOOC by Andrew Ng
- 4x American Invitational Mathematics Examination (AIME) Qualifier
- 2x Canadian Open Mathematics Challenge (COMC) Repêchage Qualifier

EDUCATION

Bachelor of Software Engineering, University of Waterloo
2018 - 2023

96.0% Cumulative GPA, 4x Term Dean's Honour List