



# LINDA ZHENG

UWATERLOO SOFTWARE ENGINEERING

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## SKILLS SUMMARY

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

**Tools:** Hive, Solr, Airflow, Amazon S3, Tensorflow, Heroku, Flask, MongoDB, Firebase, Grafana, Prometheus

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## WORK EXPERIENCE

**Incoming Data Science Intern**

Starting September 2020

*Shopify - Ottawa, ON*

**Data & Relevancy Engineering Intern**

January 2020 – April 2020

*Wish (Context Logic) - San Francisco, CA*

- Developed and tuned a pipeline that generates product embeddings for graphs with **7+ million nodes** using **GraphSAGE** architecture (a **graph convolutional network**)
- Replaced the previous embedding model with the GraphSAGE model, leading to **30%** better click prediction recall
- Introduced early stopping in random walk for graphs with **100+ million edges**, reducing latency **from 32 ms to 6 ms**
- Designed and implemented an **Airflow** pipeline to generate daily click attribution reports

**Software Engineering Intern**

May 2019 – August 2019

*Wish (Context Logic) - Toronto, ON*

- Developed keyword extraction for related product recommendation, increasing impressions by **1 million/day (+5%)**
- Built a Python package with unit tests to cross-check **Solr** updates with **S3** data to prevent data loss
- Implemented Solr boosting for product fields stored in **MongoDB**, increasing GMV by **\$20k/day**
- Launched **A/B tests** and analysed the results using **HiveQL** in Treasure Data to confirm improvements

**Web Developer**

June 2016 – June 2018

*HTBC Badminton Club - Ottawa, ON*

- Created a queryable photo gallery using Google Visualizations API Query Language, boosting website views by **8%**
  - Developed an automated e-registration system, speeding up registration time **from days to minutes**
  - Deployed a web app on **Heroku** to track badminton racket rentals using the **MERN** stack
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## PROJECTS

**Multiplayer Online Tetris Game**

2020

- Connected players via **WebSocket** connections to a **Node.js** server deployed on **Heroku**
- Used **MVC** design pattern to separate app components and **Factory** design pattern to facilitate block creation

**Scala Compiler**

2019

- Wrote a compiler that parses a subset of the **Scala** grammar into **MIPS** instructions
- Implemented nested procedures, closures, CYK parsing, type checking and garbage collection

**Smartphone Controlled Drone**

2018

- Built an **Android** app which controls a drone via Wi-Fi
  - Programmed a NodeMCU to function as both a **PID controller** and a web server to receive commands
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## ACHIEVEMENTS

- TreeHacks Sustainable Energy Winner
  - SheHacks III Best Hackathon Design
  - 2x MIT Math Prize for Girls Qualifier
  - Euclid Top 5% in Canada
  - American Mathematics Contest (AMC) 10A Top Female in Canada
  - 2x Canadian Open Mathematics Challenge (COMC) Repêchage Qualifier
  - 4x American Invitational Mathematics Examination (AIME) Qualifier
  - ECOO Programming Contest City-Wide Top Female Team
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## EDUCATION

**Bachelor of Software Engineering, University of Waterloo**

2018 - 2023

96.0% Cumulative GPA, 3-Term Dean's Honour List