

Amy Li

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Education

University of Waterloo | Bachelor of Computer Science, Business Specialization

09/2020 – 04/2025

CAV: 93% & GPA: 3.97/4.00 — Grace Hopper Scholar '22 & '21, Mathematics National Scholarship (\$25,000) '20

Involvement: UW Blueprint, TechNova, Waterloo Business Review, Tech+ Mentor, Math Orientation Lead

Work Experience

Incoming Software Engineer Intern @ Google DeepMind 🐙 London, UK

09/2023 – 12/2023

Jane Street | Software Engineer Intern 🐙

05/2023 – 08/2023

New York, NY

- Architected **OCaml** message stream application to consolidate configurations for automated trading workflows, prioritizing consistent state replication through inversion of control design and race condition mitigation
- Proposed and drove changes to centralize and normalize news data from various multicast news feeds, supporting latency requirements on **XXX+** equity trading systems through zero-allocation strategies and IO buffer parsing
- Simulated performance of trading strategies on mock exchanges, building and iterating upon automated trading systems with **Python** and **pandas**, fitting multivariate linear regression models to predict future returns

Uber | Software Engineer Intern 🐙

06/2022 – 08/2022

San Francisco, CA

- Led cross-team initiative to rearchitect and scale routing simulation service, shipping a **Java** API layer to production to support **5000+** monthly sims across **150+** business use cases, fully deprecating old sim lifecycles
- Achieved over **70%** reduction in average simulation load time and **10x** drop in CPU utilization during sim data loading through redesigning **Redis** data structures and logic flows to enable dynamic sim specifications
- Overhauled simulation resource allocation logic to support more concurrent sims, presenting and implementing designs for custom resource tuning and prioritizing discussion around software evolution and fallback logic

Bloomberg | Software Engineer Intern 🐙

01/2022 – 04/2022

New York, NY (Remote)

- Owned development of end-to-end ETL pipeline to archive **1.6TB** per month of historical asset position data to **AWS S3**, reducing database volume by **30%** to improve backend service processing performance for **1000+** clients
- Scaled archival job to support **20+ million** data rows using **Apache Spark** and **SparkSQL**, leveraging parallel processing along with resource tuning and caching strategies to lower job time from **3 hours** to **10 minutes**
- Advocated for and led schema changes in **Go** service and **PostgreSQL** database for sustainable data growth

Motive | Software Engineer Intern 🐙

05/2021 – 08/2021

San Francisco, CA (Remote)

- Spearheaded the first optimization of a new vehicle pairing algorithm, developing **Ruby** scripts to benchmark performance and identify gaps on historical data, resulting in a **7%** increase in algorithm success rate
- Streamlined data collection for the product team through cross-table **SQL** queries to Snowflake, designing **9** visualizations on Redash to improve accessibility to **600,000+** daily geolocation messages

Leadership

UW Blueprint 🐙 Co-President, previously Product Manager & Project Developer

2021 – 2023

- Led student team of **80+** members across **6** project teams and NPO partners to build tech for social good
- Defined organizational strategy, piloting internal alumni relations and external cross-campus partnerships

TechNova 🐙 Founding organizer of UWaterloo's **1st** women+ hackathon with **600+** participants

2021

Skills

Languages | Java, C, C++, OCaml, Python, Go, Ruby, Scala, JavaScript, SQL, HTML/CSS

Technologies | Apache Spark, React, Ruby on Rails, Next.js, Node.js, Express.js, Flask

Tools | Git, PostgreSQL, AWS S3, Redis, MongoDB, pandas, Argo CD, Kubernetes, Docker