

MARK LIN

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EDUCATION

University of Waterloo

Sept 2020 – Apr 2025

Bachelor of Mathematics – Statistics & Decision Theory

Waterloo, ON

Relevant Coursework: Introduction to Combinatorics, Calculus 3, Linear Algebra 2, Mathematical Statistics, Stochastic Processes, Applied Linear Models, Management Information Systems

National University of Singapore

Aug 2023 – Dec 2023

Student International Exchange – School of Computing

Singapore

Relevant Coursework: Software Engineering & Object-Oriented Programming, Computer Organisation, Data Structures and Algorithms

EXPERIENCE

Software Engineer Intern @ Cover

May – Aug 2023

Python, Flask, Vue.js, Firebase, AWS, PostgreSQL, Multi-Threaded Development, C#, ASP.NET, Docker

Los Angeles, CA

- Designed and implemented a set of algorithms that efficiently generate component layers for housing designs.
- Streamlined the onboarding process for potential clients by remodeling our property assessment procedure.
- Refactored our internal design software and API to improve scalability and performance using **Python Threads**.
- Spearheaded the launch of **Cover S** which increased sales, and reduced production and manufacturing costs.
- Developed our internal ERP system using **C#** and **ASP.NET** to support our manufacturing and supply chain engineers.

Software Engineer Intern @ Drop Technologies Inc.

Sept – Dec 2022

React Native, Ruby on Rails, AWS, Docker, Kubernetes, XCode, Redis

Toronto, ON

- Took ownership and led the team to complete a major project increasing shop engagement by an estimated **10%**.
- Improved performance of the app by identifying and fixing **N+1 queries** in our internal API.
- Implemented custom alerts tailored to the individual shoppers based on recent shopping history.
- Designed, developed and tested an end-to-end algorithm that determined when and which alerts to display to shoppers.

Software Engineer Intern @ TD Securities

Jan – Aug 2022

Angular.js, Scala, Python, React.js, Node.js, SQL

Toronto, ON

- Developed global development resources for front office trading desks in NYC, London, Singapore and Toronto.
- Worked on our flagship application dedicated to intra-day real-time management of **Fixed Income** and **FX risk**.
- Improved performance of trading servers by writing **Python** scripts which helped discover and solve server lag issues.
- Created a complex risk trade curve editor using **React.js** and developed our internal **RESTful API**.
- Led weekly social meetings as a committee leader with **20+** attendees for international co-ops and associates.

Software Developer Intern @ Year Zero Studios

May – Sept 2021

React.js, Firebase, Stripe, Typescript, Vercel

Toronto, ON

- Assisted the Product Manager in the onboarding process and increased app usage by over **100%**.
- Redesigned the entire website, refactored our RESTful APIs and architected the backend in Firebase.
- Added **Cypress** and **Sentry** to standardize deployment procedures through unit tests to reduce bugs in production.
- Implemented payment methods and scheduling with **Stripe** and **Zoom** API's.

Software Developer Intern @ DxChain Network

Aug – Sept 2019

Solidity, web3.js, HTML/CSS, Node.js

San Francisco, CA

- Created an optimised smart contract on the Ethereum blockchain using **Solidity** and **Node.js**.
- Built a decentralized application where users can pool their ether to earn the chance of increasing profits.
- Architected and developed the entire Solidity backend and designed the frontend of the application using **HTML/CSS**.

PROJECTS

NoteWarrior | *React.js, Next.js, MongoDB, Express.js, Vercel*

- Website for buying and selling notes among University of Waterloo students using the MERN stack.

TECHNICAL SKILLS AND INTERESTS

Languages: Python, Java, C/C#/C++, Scala, Ruby, HTML/CSS, JavaScript/Typescript, SQL, GraphQL, Racket, R

Interests: Chess, Rock Climbing, Hiking, SSBU