MARK LIN

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SKILLS

Languages: Java, Python, JavaScript/Typescript (React, Node, Vue), C# (.NET), C/C++, Bash, Scala, Ruby (on Rails)
Technologies: Git, AWS, Microsoft Azure, Firebase, Docker, Kubernetes, WSL, Jira, GA4

EXPERIENCE

Software Engineer Intern @ Cover   May 2023 – Aug 2023

Python, Flask, Firebase, AWS, PostgreSQL, Docker, C#, ASP.NET, Microsoft Azure, EF Core, Vue.js   *Los Angeles, CA*

- Designed and implemented a set of algorithms using Python's **multiprocessing**, to reduce sequential component layer generation between components for Cover housing designs, reducing runtime by **15%**.
- Spearheaded the launch of **Cover S** by designing our website, and streamlining the onboarding process for potential clients by remodeling our property zoning tool, receiving commendation from CEO.
- Architected and developed scalable back-end web infrastructure for our internal ERP system to support our manufacturing and supply chain engineers.
- Worked directly with the Head of Sales to launch our first social media campaign, increasing sales by an estimated **50%**.

Software Engineer Intern @ Drop Technologies Inc.   Sept 2022 – Dec 2022

Ruby on Rails, AWS, Docker, Kubernetes, XCode, Redis, React Native   *Toronto, ON*

- Took ownership and led a team of 5 to complete a major upsell project increasing shop engagement by **10%**.
- Designed, developed and tested an **end-to-end algorithm** that determined when and which alerts to display to shoppers to reduce unnecessary noise from our app by leveraging internal customer shopping behaviour data.
- Improved performance of the app by **12%** by optimizing queries in our internal API.

Software Engineer Intern @ TD Securities   Jan 2022 – Aug 2022

Scala, Python, Akka, Node.js, SQL, React.js, Angular.js   *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 our servers through Python scripts which helped discover and reduce server lag issues by **15%** .
- 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.

PROJECTS

Wellify | *Firebase, React.js, Typescript, Vercel, Stripe, Zoom*   *well.cards*

- A platform for wellness instructors to monetize and host their classes.
- Successfully onboarded 10+ wellness instructors over the course of the pandemic.

Virtual Miner | *Solidity, web3.js, Node.js, Truffle Suite*   *Virtual Miner*

- A decentralized application where users can pool their ether to earn the chance of increasing profits.
- Architected, built and tested entire backend using Solidity and Truffle Suite.

Duke | *Java*   *Duke*

- Built a CLI tool to help users keep track of tasks, deadlines and events.
- Developed using the Object-Oriented Programming paradigm to learn industry best practices.

EDUCATION

University of Waterloo   Sept 2020 – Apr 2025

Bachelor of Mathematics – Computer Science, Statistics & Decision Theory   *Waterloo, ON*

Relevant Coursework: Introduction to Combinatorics, Multivariable Calculus, 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

INTERESTS

Interests: Enjoys hiking, surfing and golf, and would like to summit Mount Witney.
Extracurriculars: Sheares Hall Touch Rugby Team