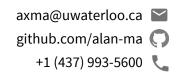
# Alan Ma



#### Education -

# **University of Waterloo** | *B.Sc. Software Engineering*

2018 - 2023

- 3.86/4.0 GPA, President's Scholarship of Distinction
- Relevant Courses: Operating Systems, Data Structures, Computer Networks, Concurrent Programming

#### Skills -

Languages: C/C++, Java, SQL, Python, JavaScript/TypeScript, Ruby

Technologies: MongoDB, GraphQL, React, Vue.js, Flask, AWS SQS, Firebase, Git

#### Experience —

# **Snowflake** | *Software Engineer Intern*

May 2021 - Present

- Engineered a framework in Java to generate testing scenarios based on production micro-partition metadata, enabling the team to benchmark database indexing algorithms during development
- Built data visualization tools in Python to monitor the behavior of query optimization algorithms

# **Shopify** | *Software Engineer Intern*

Sept - Dec 2020

- Reduced fraud detection processing time by 12% by adding connection pooling to network requests
- Overhauled an open-source API library using Ruby, adding type checking and immutability
- Built a version comparison app for support teams to identify performance issues in merchant storefronts

#### **Wish** | *Software Engineer Intern*

Jan - Apr 2020

- Boosted notification click rate by 15% for marketing campaigns by optimizing ranking algorithms in Python
- Implemented inline promotions in product feeds, growing ad revenue profit by \$2.3 million annually
- Engineered a distributed push notification library using AWS SQS, upgrading security to OAuth 2.0

#### **Oracle NetSuite** | *Software Engineer Intern*

May - Aug 2019

- Built bonus management features in payroll software using Java, enabling accurate compensation tracking
- Prevented errors related to accrued paid time off by developing a more robust algorithm

#### Projects -

# **DECA Online Education Platform** | hub.decawoodlands.com

2017 - 2020

- Developed a full-stack application for practicing business exams using Python and Vue.js, leading to a 50% increase in members qualifying for international events
- Implemented user roles and token-based authentication to secure REST API endpoints in a Flask server

#### FireWatch – Hack the North 2018 Winner | devpost.com/software/firewatch

2018

• Built a website to warn residents about wildfires, using JavaScript to display real-time satellite data

#### Extracurricular Activities -

### **Hack the North** | Organizer (2019 Logistics, 2020 Sponsorship)

2019 - 2021

• Raised sponsorship from over 30 companies for Canada's biggest hackathon with over 3,000 students