Alan Ma

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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++, Java, SQL, Python, JavaScript/TypeScript, Ruby
Technologies: MongoDB, GraphQL, React, Vue.js, Flask, AWS SQS, Firebase, Git

Experience

Citadel Securities | *Incoming Software Engineer Intern*   *Jan – Apr 2022*

Snowflake | *Software Engineer Intern*   *May – Aug 2021*
• 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

Projects

DECA Online Education Platform   *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
• Coordinated transportation to bring 1,500 students from over 40 countries to the University of Waterloo