Matthew Chow

Software Engineer | Computer Engineering @ UBC

Contact

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Education

University of British Columbia
BASc Computer Engineering
Sep 2018 - May 2023
GPA: 3.61/4.00
Deans Honour List

Skills

Languages
Python, JavaScript, Go, Java, HTML/CSS

Tools
AWS, Express, MongoDB, React, Git, Ansible

Courses

Coursera (See Certificates)
Deep Learning Specialization (5/5 Courses)
TensorFlow Developer Certificate (1/4 Courses)

University
Machine Learning & Data Mining
Software Engineering
Data Structures and Algorithms
Mathematical Proof

Extracurriculars

Inter-varsity Christian Fellowship (Service Team Lead)
Wushu (Chinese Martial Art - Competed in Nationals)

Experience

Undergraduate Research Assistant | UBC — Sep 2021 - Present
- Researching the explainability of Machine Learning models for malware detection under the supervision of Dr. Rubin

Software Engineer Intern | League — May 2021 - Aug 2021
- Streamlined content publishing workflows for internal teams by 50% for the PC Health app (100k+ downloads)
- Developed a script in Go to auto generate code from API specifications; simplified microservice creation workflows
- Transferred MongoDB collections to new schemas with migration scripts in Go
- Defined and presented deployment strategy to maintain backwards compatibility for updated database logic

Software Developer Intern | SAP — Sep 2020 - Apr 2021
- Refactored a deployment pipeline in Jenkins and Python that serves 1,000,000+ users in AWS, Alicloud, and Azure; decreased runtime by >25%
- Maintained a Java microservice by migrating functionality from deprecated dependencies and creating load tests in Python
- Automated Linux virtual machine configuration with Ansible
- Produced design documentation and UML diagrams; justified design with respect to user, security and time requirements

Software & QA Engineer Intern | Perk Labs — Jul 2020 - Aug 2020
- Developed and adapted wireframe components into UX features in React Native
- Strengthened UI/UX design by identifying pain points in transaction flows and proposing readability improvements
- Served an optimal experience for 5000+ users with regression and integration tests

Projects

Pilldex | 4th Place in 2020 Software Engineering Year
- Constructed the backend for a pill tracker that dynamically schedules reminders based on user behaviour
- Established a RESTful API with Express on an EC2 instance; verified correctness by creating a test suite with Jest, achieving 100% line and branch coverage

ImageStash
- Developed a full stack image repository application with React and Express to handle storage of user images; operated on an EC2 instance
- Managed user information and images in S3 and a MongoDB Atlas cluster

Foex | nwHacks2020 (Wolfram Award Top 35/145)
- Mitigated food waste by calculating and logging expiry dates for users from images with a Java Android app
- Extracted colour and object information from images to classify and determine an expiry date with the Microsoft Azure Computer Vision API