# NICHOLAS WU

nickwu241@gmail.com | 778-712-5588

nickwu241.github.io
github.com/nickwu241
linkedin.com/in/nick-wu

## EDUCATION

**University of British Columbia**, BASc Computer Engineering — Sept 2014 – Sept 2019

- Current recipient of Trek Excellence Scholarship for being in the **top 5%** of Computer Engineering.

## SKILLS

- Languages: **Python, Java, Go, JavaScript**, C++, Swift, Scala, Ruby, Bash.
- Technologies: Docker, AWS, GCP, Terraform, Ansible, Kafka, React, Vue, REST, JSON.

## EXPERIENCE

**Shopify**, Software Engineering Intern – Data Infrastructure (Python, Go, JavaScript, Swift, Scala, Ruby) — Jan – Aug 2018

- Built a Scala service to replicate 100K+ daily SQL queries onto **Presto** clusters for testing updates and performance.
- Developed a full-stack **Rails** application to visualize deployments, resources, and access control in all **GCP** projects.
- Built a CLI to manage GCP deployments, enabling self-served services such as Presto, Mode, Azkaban for all teams.
- Shipped a macOS application using **MVC** architecture, reducing authentication for data services to a Google login.

**Hootsuite**, Software Developer Intern – Production Operations (Python, Go) — Sept – Dec 2017

- Embraced immutable infrastructure for internal services by using: **Terraform** to develop infrastructure as code, **Ansible** to configure **AWS** instances, and Packer to build AMIs and **Docker** images.
- Automated resource access management for onboarding and offboarding developers to reduce toil.
- Developed Role-Based Access Control for all services to enable SOC2 compliance.

**University of British Columbia**, Undergraduate Researcher (Java, C) — May – Sept 2017

- Developed DINAMITE, a software performance analysis tool for C programs under Dr. Alexandra Fedorova.
- Reduced 50-100% overhead in CPU tracing by leveraging RTDSC instruction to capture timestamps.
- Established Java support for DINAMITE by implementing CPU tracing using JVM TI to communicate with C libraries, ASM to inject bytecode instructions, and Java's instrumentation API to attach a Java agent.

**Safe Software**, Software Developer Intern – Platforms (Java, C++) — May – Dec 2016

- Migrated C++ compiler from Visual Studio 2015 to 2017 for over 800+ projects enabling C++11/14 features.
- Implemented the Teradata format using JDBC, allowing clients to read from and write to Teradata databases.

## PROJECTS

**UBC Course Schedule Creator** (Go, JavaScript, Python) — Aug 2017 – Present

- Built a full-stack application using **Vue**, Go, and Firebase with **CI/CD** to output schedules given input courses.
- Automated scraping data for every course at UBC into a Firebase Database using AWS Lambda.

**Spotty** (JavaScript) — May 2018

- Won 1st place at RUHacks 2018 for creating an IoT solution allowing hosts to advertise parking spaces.
- Integrated Raspberry Pi, Alexa, cameras, sensors with a **NodeJS** backend and **React Native** application.

**Review Me** (JavaScript, Python) — Feb 2018

- Won the AWS prize at HTV 2018 for creating a tool to remind reviewers to review code via SMS/Slack messages.
- Created frontend dashboard using **React** and backend using **Flask**, GitHub API, Slack API, AWS.

**Atlantis**, an **open-source** tool for collaborating on Terraform (Go) — Oct – Dec 2017

- Designed and implemented Slack integration, enabling Atlantis servers to notify Slack channels.

**UBC Snowbots** (Python, C, C++) — Sept 2014 – Sept 2016

- Built a robot that navigates through an obstacle course, placing 4th/42 teams at an international competition.
- Integrated GPS firmware into the robot to relay real-time data for software driver to make decisions.