

# Nicholas Wu

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## EDUCATION

**University of British Columbia**, Bachelor of Applied Science, Computer Engineering      Sept 2014 – Aug 2019

- Recipient of Trek Excellence Scholarship: top 5% of Computer Engineering.
- Teaching Assistant for CPSC 304, Introduction to Relational Databases.

## SKILLS

Languages: **Python, JavaScript, Go, Dart**, Java, Ruby, Scala, C#, C++, Swift.

Technologies: Docker, AWS, GCP, Terraform, Ansible, Kafka, React, Vue, REST.

## EXPERIENCE

**Shopify**, Software Engineering Intern - Data Infrastructure      Jan 2018 – Aug 2018

- Created a Ruby on Rails application to visualize deployments, resources, and permissions of Shopify's Google Cloud infrastructure; created metrics and alarms to minimize security risks.
- Built a Scala service to validate 400,000 SQL queries against bi-weekly PrestoDB upgrades to detect backward compatibility breaks and performance regressions.
- Shipped a macOS application to simplify authentication from 6 steps to 2 steps for data services.

**Hootsuite**, Software Developer Intern - Production Operations      Sept 2017 – Dec 2017

- Embraced immutable infrastructure for internal services by using: Terraform to develop IaC (Infrastructure as Code), Ansible to configure AWS instances, and Packer to build Docker images.
- Automated granting and revoking access to machines, databases, and GitHub to reduce 60 hours of work to 1 hour of work per month.
- Created Role-Based Access Control for services to enable SOC2 security and privacy compliance.

**University of British Columbia**, Undergraduate Researcher      May 2017 – Sept 2017

- Reduced 50-100% overhead in CPU tracing by DINAMITE, a software performance analysis tool, through using the 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      May 2016 – Dec 2016

- Migrated C++ compiler from VS 2015 to 2017 for 800+ projects, enabling C++11 features.
- Implemented the Teradata format using Java, allowing clients to read from and write to Teradata databases.

## PROJECTS

**Spotty**: Won RUHacks 2018 for an IoT solution allowing hosts to advertise their private parking spots.

**Review Me**: Won the AWS prize at HTV 2018 for a tool to remind reviewers to review code via Slack and SMS.

**Alexa Assignment Deadlines**: Won UBC Canvas Hacks 2018 for an Alexa skill to tell you your deadlines.

**Teamfight Tactics App**: Shipped a companion app for the game Teamfight Tactics with 100+ downloads.

**UBC Course Schedule Creator**: Built a full-stack application to output all possible schedules given input courses.

**Atlantis (open-source)**: Implemented Slack integration enabling Atlantis servers to notify Slack channels.

**Food Shake**: Created a mobile application that randomly selects a nearby restaurant upon shaking the phone.

**UBC Snowbots**: Built a robot to navigate around an obstacle course, placing 4th at an international competition.