

NATHAN WU

✉ nwu1018@gmail.com ☎ 6289467164 [in na-wu](#) [na-wu](#) <https://nawu.ca>

EXPERIENCE

Affirm, Software Engineer Aug 2022 – present | New York City

- Performed an end-to-end migration from Apache Airflow 1 to 2, supporting optimized scheduling and distributed computing on **Kubernetes**
- Led the migration of 7 Observability **EMR** pipelines to **Spark** on Kubernetes, reducing infrastructure and compute costs annually by roughly \$1.5 million
- Redesigned a service that discovered batch pipelines and allowed for on-demand execution, increasing developer productivity and eliminating on-call toil with no degradation of service
- Integrated a application agnostic metrics exporter that pushes metrics to be consumed by any TSDB system

Affirm, Software Engineer Intern Sep 2021 – Dec 2021 | San Francisco

- Built out **Apache Airflow** infrastructure and framework on **Kubernetes** improving pipeline reliability, speeding up deploys, and reducing dependencies on internal systems
- Automated AWS resource provisioning using **Terraform** while maintaining granular permissions and Role Based Access Control
- Unified Affirm's batch computing framework by creating reusable and containerized code with **Docker**, executable from any environment

Wealthsimple, Software Engineer Intern May 2021 – Aug 2021 | Toronto

- Designed and implemented an Invoicing and Billing system in **Rails**, automatically generating invoices, notifying customers, and collecting payments, reducing manual work from hours to minutes.
- Developed views for customers to view, filter, and download past invoices in **React** and **GraphQL**
- Refactored Wealthsimple Work's external notification system with internal tools to launch a more robust notification service

Amazon Web Services, Software Development Engineer Intern Sep 2020 – Dec 2020 | Toronto

- Designed a scalable, extensible, and fault-tolerant ETL pipeline that extracts operational data from global **DynamoDB** tables, loads into **S3**, and exports into **Redshift**
- Developed a event-driven **Lambda** transformation engine in **Python** that performs custom transformations on data to match existing schemas
- Designed database schemas that allows for cross-joins with existing tables

EDUCATION

University of British Columbia, Majors: Computer Science and Business 2016 – 2022 | Vancouver

Courses: Intermediate Algorithm Design, Advanced Database Management, Internet Computing, Linear Algebra

SKILLS

Back-end Technologies: Python, Java, NodeJS

Front-end Technologies: ReactJS, Ruby

Other Tools: AWS, Apache Airflow, Terraform, Kubernetes, Docker, GraphQL

PROJECTS

Stylisr, NodeJS, React, Heroku, AWS, Firebase, GraphQL, MongoDB

- A reddit-styled platform that encourages fashion-related discussion, regardless of background