

Swagat Ghimire

3RD YEAR COMPUTER SCIENCE STUDENT · UNIVERSITY OF WATERLOO

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Technical Skills

Languages Python, C, C++, Go, Scala, Java, JavaScript, SQL, BASH

Technologies Git, AWS, Hadoop, Spark, Kubernetes, Spinnaker, Flask, Django, AngularJS

Work Experience

Datadog

Sep - Dec 2018

SOFTWARE ENGINEERING INTERN - DISTRIBUTED SYSTEMS

Go, Python, Kubernetes, gRPC, Protobuf3

- Simplified provisioning by creating an interface to **safely backup and restore live stateful services** in a multi-cloud environment
- **Reduced incident response time** for production services by developing data integrity checks, monitoring, and alerts
- Improved the reliability and performance of a core caching service responsible for **10k requests/sec** by migrating to gRPC
- Restructured services to follow a Kubernetes based **container orchestration** model to increase scalability and resilience

Datadog

Jan - Apr 2018

SOFTWARE ENGINEERING INTERN - DATA ENGINEERING

Scala, Python, Spark, Hadoop, Luigi, AWS

- Analyzed and visualized internal data used to **inform key business decisions** made by executives, PMs, CSMs, and salespeople
- Architected and implemented major pipeline changes to correctly and effectively **comply with the GDPR**
- Enhanced a Luigi and Spark **data pipeline** to support new datasets and conduct more intensive analysis
- Integrated **millions of logs/day** with Datadog's log management service to increase efficiency in the team's debugging process

CANARIE

Apr - Aug 2017

SOFTWARE DEVELOPER (CO-OP) - DATA ENGINEERING

Python, MySQL, AngularJS, Django

- Led a database migration from MySQL to ClickHouse to enable a **100x increase in query speeds**
- **Saved 4+ hrs/wk of engineer time** by designing and deploying a pipeline to automate the collection, processing, and analysis of network traffic data
- Increased **network observability** by creating client-facing network traffic reports for daily monitoring and quarterly reporting

Projects

Phill Good

Web App

PYTHON, FLASK, SQLITE

- Built a data analysis tool that used **millions of data points** to help users learn about specific Philadelphia neighbourhoods
- Conducted a **statistical analysis** with a set of Python scripts to determine how a location's data compared to the rest of the city
- Illustrated the location of nearby businesses and facilities by integrating with the Google Map API

StockStory

Web App

JAVASCRIPT, JQUERY, CHART.JS, BOOTSTRAP

- Created a financial analysis tool that allows users to cross reference stock data with historical news data in an **interactive chart**
- Provided users with relevant articles and their immediate **sentiment analysis** using various news APIs

Merivale Legacy

Android App

JAVA, ANDROID STUDIO

- Developed an app to increase student involvement in school events by centralizing several calendars and announcements
- Created a **personalized experience** by integrating with the students' school accounts using OAuth 2.0 to facilitate Google Login

Education

University of Waterloo

Waterloo, ON

CANDIDATE FOR BACHELOR OF COMPUTER SCIENCE, HONOURS

2016 - Exp. Apr 2021