Kara Dietz

Software Engineering | University of Waterloo

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SKILLS

Languages Java • Python • Golang • C • C++ • Ruby • Swift • SQL • HTML • CSS
Tools & Frameworks Git • AWS • Kafka • Docker • Kubernetes • Jenkins • Maven • Vim

WORK EXPERIENCE

Shopify   *Sept. 2020 - Dec. 2020*
Production Engineer Intern

- Maintained **Kafka** streaming platform used to produce and consume data between customers, merchants, and teams within Shopify
- Spearheaded the automation of partition scaling for Kafka topics, reducing hours of manual work for hundreds of clients, enabling faster performance and reducing operational issues by better distributing data across brokers
- Enhanced Kafka wrappers written in **Go** and **Ruby**, reducing code required by users and enforcing best practices to improve consistency and enable better incident management
- Automated monitoring of message streams using Datadog api, **Python**, **Docker**, and **Kubernetes**

Capital One   *Jan. 2020 - Apr. 2020*
Software Engineer Intern

- Created **Kafka**, **AWS Lambda**, and **AWS Kinesis** serverless pipelines to detect patterns and notify customers in real-time of potential fraudulent activity or offer insights for managing their account
- Added integration testing platform to real-time pipeline deployment process, eliminating the need for 1-5 day production change approvals by surpassing quality thresholds, and enabling fully continuous development
- Built **AWS Lambda layers** with **Java** to streamline pipelines, accelerating iteration and increased scalability
- Led data analysis using **Apache Spark**, **Python**, and **SQL** to validate results stored in **Amazon S3** buckets

OpenText   *May 2019 - Aug. 2019*
Software Developer Intern

- Designed, developed, and tested debugging tool using **Python** and **SQL** to automate the categorization of test failures, and display data on a new webpage, saving 4 hours per week
- **Automated UI tests** on a customer communication management application using local **VMs** via **Jenkins**, ensuring precise tests and increasing runtime by more than 5x
- Quickly learned new skills and worked efficiently, leading me to finish project 1 month earlier than expected

PROJECTS AND RELEVANT EXPERIENCE

Multi-Protocol SPDZ | *Python, Bash, C++*

- Contributor to **open source** software which benchmarks security of various **multi party computation** protocols
- Working on refactoring code base which tests Tensorflow inference models in multi party computation scenarios to maximize scalability through abstraction and enable more robust testing
- Collaborated with a cryptographer to implement his ideas using best practices for software engineering

Ballerinify iOS app | *Swift, Xcode, TensorFlow*

- Developed an **iOS app** using **Swift**, **AVFoundation**, and **UIKit** which uses the camera to watch a person in real-time and accurately identify the dance position that the user is in
- Employed the **Tensorflow Posenet** machine learning model to map key points on a person's body

EDUCATION

University of Waterloo   *Sept. 2018 - Apr. 2023*
Candidate for Bachelor of Software Engineering with a Diploma in Sustainability

- Term Dean's Honour List | Term Average: 91.82%