Kameshwara Sekar

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Education

Bachelor of Science (Applied) in Software Engineering, University of Calgary *September 2018 – present*
- GPA: **3.624**

Relevant courses: Data structures and algorithms, Data Science, Principles of Software Design, Embedded System interfacing, Principles of Operating systems, Data Base Management System, Computer Networks, Software Architecture, Introduction to Virtual Reality and Software Testing, Reliability, and Quality.

Employment

Blackline Safety *May 2021 – August 2022*

DevOps Engineer Intern *May – August 2022*
- Automated the deployment of an essential service using CI/CD with AWS CodePipeline, CodeBuild, and CodeDeploy which sped up deployment by 60% and cut deployment costs by 15% while also optimizing the software development cycle.
- Migrated existing infrastructure components to Terraform, consolidating all infrastructure code under one uniform, easier-to-manage framework.
- Initiated the transition from old monolithic apps to microservices by deploying a RabbitMQ cluster as a microservice with Route53 using terraform.
- Created impactful dashboards and alerts in Datadog for Safety Operations Center (SOC) in the Europe region to facilitate monitoring.

Architecture Intern *November 2021 – April 2022*
- Architected a new data migration process by replacing the pre-existing ETLs with Change Data Capture (CDC) on AWS Data Migration Service, Amazon Kinesis, and Lambda which made adding a new destination data source easy and decreased the cost of data replication by 35%.
- Investigated and evaluated the functionality and capability of AWS Appsync to read and aggregate data from multiple data sources.
- Conducted a Proof of Concept (POC) on time series databases, concentrating on Influx DB, Timescale DB, and AWS Timestream which included examining the products' performance, availability, security, cost, difficulty, and several other aspects.

Backend Engineer Intern *May – October 2021*
- Developed a greenfield API service that provided cleansed semi-structured historical data to up to 500 customers during the initial release.
- Pioneered a data writer to process 1 million daily raw Redshift records using Apache Spark, AWS EMR, AWS DynamoDB, and AWS Lambda, resulting in clean, semi-structured data.
- Refactored the codebase following better programming practices to lower the execution time by 3-fold and the cost of testing by 100%.
- Created a checkpoint table for the software to maintain an account of earlier successful runs, assisting both the program and the developers.
- Revised and migrated the data stores and data pipelines to the Europe region to make the service GDPR compliant.

Software Projects

Alberta Mental Health Advocacy Coalition (AMHAC) Web Development, Code the Change YYC (Club)
- Collaborated with three other students to develop a website for AMHAC to help spread mental health awareness in Alberta.
- Collaborated with leading logo developers in Calgary to design a logo for AMHAC.
- Interacted frequently with the client and the mentors in the club to provide scheduled updates and receive feedback for completed segments.

Robot Arm Controller, Schulich Space Rover Team (Club)
- Composed code to control a robot arm of the Rover with a PS4 Controller and Raspberry Pi using Python and Phidget22 libraries.
- Developed inverse kinematic equations to help write the code for a robotic arm with 3 degrees of freedom.
- Researched about Klampt python library to incorporate its features in the existing codebase.

Skills

Languages: Terraform, C & C++, Python, SQL, Scala, Java, HTML, CSS, Bash

Utilities and Tools: Amazon Web Services (AWS), Git, Jira, Jenkins, Linux, Apache Spark, Datadog, Docker, RDBMS, VPCs, and Subnets

Software Topics of Interest: Machine Learning, Data Science, Microservices, Docker, CI/CD, OOP, and Software Management