Akshit Rameshkumar Desai

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TECHNICAL SKILLS

Languages : Golang, Python, C++, Java, JavaScript
Databases : MySQL, PostgreSQL, MongoDB, Redis, DynamoDB, YugabyteDB
DevOps & MLOps : AWS (S3, Lambda, Step functions, IoT Core, EKS, KVS), Docker, Kubernetes, Harness, Spinnaker, Kubeflow, SageMaker
Other Tools : Kafka, RabbitMQ, Git, Selenium, key-cloak

EXPERIENCE

InstaVision Inc — Remote, Canada
Software Engineer II — 08/2023 - 05/2024

- Developed back-end services with more than 50 APIs from scratch with domain-driven architecture in Golang for an AI-driven outdoor/indoor security camera products. (link)
- Led efforts for designing database architecture for the major micro services using MongoDB achieving 5ms average database latency.
- Load tested Back-end services using locust.io framework in Python and setup workflow for automated load tests.
- Designed workflows for connecting cameras with the system, integrating AWS IoT components such as things, things-shadow, certificates, life-cycle events, and other communications through MQTT.
- Engineered a wrapper library for internal use, generalizing AMQP for RabbitMQ, AWS, Backblaze, MQTT, middlewares, validators, metrics, logger, net/http client wrapper, and push notification clients(i.e., APNS, FCM, and Pushy.me) across the micro-services.

Amazon — Vancouver, Canada
SDE Intern — 05/2023 - 08/2023

- Implemented data pipeline to dump data into S3 Bucket using automated cradle jobs and it's job-profiles. Injected data to DynamoDB using AWS CDK(Typescript) to create automated resources(GlueJobs, DynamoDB etc).
- Created new API views using Datapath (Amazon's Declarative Language) and service APIs using Scala(Coral framework), enabling approximately 15 teams at Amazon to seamlessly integrate with the service.
- Improved observability by adding alarms using internal framework(Ruby) and push-metrics for new & existing APIs.

Kamivision — Remote, Canada
Software Engineer — 04/2022 - 05/2023

- Developed & improved different APIs enhancing p99 latency by 50%, and designed workflows of core back-end services in Golang for camera solutions used in senior living communities. (link)
- Programmed CLI tool for AI team to get videos from AWS kinesis video streams for analyzing and training AI models, automating manual efforts of 2 days, and optimized it further with concurrency.
- Collaborated with Science team to set up kubeflow with Custom RBAC on kubernetes on the local server.
- Revamped Unit-testing and CI pipeline in major back-end services. Educated team with Unit-testing & integration testing, reducing a number of production failures and bugs by 50%.

Zopsmart — Bengaluru, India
SDE I — 06/2021 - 04/2022

- Architected and optimized Golang-based ETL pipelines for **Kroger Co, US**, and its subsidiaries, achieving seamless migration, synchronization, and merging of user data; handling daily traffic of 9 million users using kafka and ensuring uninterrupted data flow.
- Introduced & engineered distributed locking mechanism, Data fix Scripts, DB-retry features, resolving data discrepancy errors; Automated Bulk data migration using shell scripts, reducing 8 hours of manual efforts.
- Developed separate pipeline to process high load events from scratch workers following channel patterns, improving data processing time by 60% on an average.
- Maintained and set up deployment pipelines on harness from scratch; Enhanced monitoring process by adding Grafana and Dynatrace tools for data visualization.

SDE Intern — 02/2021 - 06/2021

- Delivered end-to-end functionalities for internal project.

EDUCATION

Concordia University, Montreal - *M.Sc. in Applied Computer Science* **(GPA: 3.8/4.3)** — 09/2022 - 04/2024
Gujarat Technological University - *B.E. in Computer Engineering* **(GPA: 9.4/10.0)** — 08/2017 - 05/2021

PROJECTS

Online graph coloring | Javascript, React.js, C++ | ⭘ 🔗 ⟨/⟩

- Online graph coloring visualizer, solved by CBIP and first fit Algorithm.

Kubeflow-GNN | Python(PyTorch), Kubeflow, GCP | ⭘ ⟨/⟩

- Trained SAGEConv for predicting link properties in document citation networks. Orchestrated GNN model training as a PyTorchJob within Kubeflow, leveraging Pytorch DDP for distributed training and reduced training time by 40%.

ChuckMate | Python(Django) | ⭘ 🔗

- A Web app with roughly 100 monthly active users, feeding new jokes on every click.

ACHIEVEMENTS

- **ACM ICPC - Honourable Mention** : Secured 477th (top 10%) rank in the online round and 79th in the Kanpur region round of ICPC Asia Kanpur Regionals. 🔗