Aanand Kainth

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SKILLS

Languages: Python, Java, JavaScript (JS), TypeScript (TS), React, Kotlin, Go, Node.js, Bash
Systems: Kafka, PostgreSQL, PGVector, MongoDB, Firestore, SQL, NoSQL, Next.js
Tools: AWS, Google Cloud Platform, Docker, Git, Linux/Unix, Stackprof

EXPERIENCE

Software Engineer @ Amazon Web Services (AWS) Managed Kafka   Feb 2024 – Present
- Reduce Kafka compute reservations by **$73k/month** with binomial models of canary activity by availability zone
- Implemented reporting of orphaned Kafka partitions, enabled customers to reduce 3+ brokers for affected clusters
- Developed tooling to tear down dev infrastructure to save **$31k-$124k / month**
- Reduced execution time for a build process from 11m to 1m (**91% reduction**) using Stackprof and memoization
- Led intern in development of workflows to refresh Kafka cluster certificates without restarts, reducing downtime

Software Engineer Intern @ Amazon Web Services (AWS)   Jun 2023 – Sep 2023
- Prototyped a new service backend to ingest 1k OpenTelemetry traces per second using Go and Docker on ECS
- Authored an iOS retail store app using Swift to test collecting load time/crashes from mobile apps
- Instrumented retail store website to discover parity between OT and AWS instrumentations and identify integrability

Software Engineer Intern @ Plume Design Inc.   Jun 2021 – Sep 2021
- Developed 12+ REST HTTP APIs backed by MongoDB in a distributed Node.js microservice, tested with Sinon
- Standardized Protobuf schemas and endpoints to gRPC to reduce service load and latency

Fellow, Facebook AI Research (VISSL) @ Major League Hacking   Feb 2021 – Apr 2021
- Identified and fixed long-standing bug, repairing the performance and consistency of 20+ models
- Implemented square-root LR scaling for ~10% faster convergence for parallel workloads
- Revamped event system to pluggable storage, including Tensorboard, HiPlot, and 2 more integrations

Fellow, BentoML @ Major League Hacking   Jun 2020 – Sep 2020
- Collaborated with maintainers to refactor the public interface, reducing average size of PRs by ~40%
- Integrated PySpark ML, to support **1k+ users** deploying 20+ models quickly and scalably

Software Engineer Intern @ Plume Design Inc.   Jun 2019 – Sep 2019
- Overhauled front-end data rendering using Chart.js, **reducing load times by 0.6s**, saving engineers 10 hrs / month
- Migrated an 50k SLOC AngularJS application to Angular 8 over the course of 1 month, and upgraded to ES6
- Developed REST HTTP endpoints to support IPv6 with Loopback, and tested using Sinon

EDUCATION

BSc in Computer Science @ University of California, Santa Cruz   Oct 2020 - Jun 2023
GPA: 3.93 (Magna Cum Laude), Dean's List, President of UCSC Rocket Team

ADDITIONAL EXPERIENCE

President @ UCSC Rocket Team   Oct 2020 - Jun 2023
- Coordinated 26 students to build & launch a $5,500 rocket, placing 26th in the NASA University Student Launch
- Devised and simulated a real-time flight path prediction algorithm with an accuracy of 10 ft with CircuitPython