Roilan Roman

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Skills

Java, Ruby on Rails, Python, Javascript, Go, SQL, NoSQL
Airflow, Argo Workflows, Spark, Delta, Snowflake, Kafka, Debezium, dbt, Deequ, Redshift
Amazon Web Services (AWS), Docker, Terraform, Argo CD, Kubernetes
LangChain, LLM, HuggingFace, PyTorch, Tensorflow, Numpy

Experience

Staff Software Engineer (L8)

Amazon

Jan 2021 - Now

- Faced with rising patient bottlenecks across 500+ clinics, led backend development of a (Web) HIPAA-compliant telehealth platform. Integrated video conferencing, EHR (HL7/FHIR), and AI triage bots, intake form processing, and Stripe-based payments resulting in a 35% reduction in appointment wait times.
- Migrated 10+ microservices in event driven architecture and to address data privacy risks and regulatory demands, implemented end-to-end encryption for patient medical records, ensuring full HIPAA compliance and reducing data breach incidents by 90%.
- Tasked with reducing infrastructure costs and improving platform reliability, led the migration to AWS cloud, leveraging Docker and Kubernetes for containerization and auto-scaling, which resulted in 99.9% uptime and a 20% drop in server costs.
- Conducted A/B testing on AI and microservices workflows, refining algorithms and system interactions based on user feedback, boosting service effectiveness, and increasing patient satisfaction.
- Skills: Java, Spring boot, Python, FastAPI, AI/ML, Event Driven(Kafka), Microservices, ECS, EC2, IAM, OAuth, JWT, WebRTC, PostgreSQL, MongoDB, CI/CD pipeline, React, Redux, Javascript, Typescript,

Site Reliability Engineer

Datadog

Dec 2016 - Dec 2020

- Designed and implemented a **large-scale data pipeline** processing 10TB+ daily, serving as the core infrastructure for Datadog's monitoring platform, enabling real-time analytics for 10,000+ cloud-scale customers.
- Built a **Kafka/Go-based intake-to-storage pipeline** supporting 1M+ events/sec, achieving 99.99% uptime through dynamic partitioning, autoscaling, and fault-tolerant design.
- Redesigned Kafka's partitioning strategy from fixed to real-time dynamic sharding, eliminating hotspots and enabling linear scalability (200% throughput improvement) for fluctuating workloads.
- Built a hybrid storage system combining in-memory databases (Redis) for low-latency queries and AWS S3 for long-term retention, reducing storage costs by 40% while maintaining sub-100ms query performance.
- Skills: Kafka, Golang, Redis, AWS S3, EC2, PostgreSQL, NGINX, Elasticsearch, Twilio SendGrid, Kubernetes, Docker

PROJECTS

LangChain Chatbot | Github link

Built a full-stack AI chatbot using LangChain, FastAPI, and React with RAG-based architecture for real-time, context-aware responses, containerized with Docker for seamless deployment.

Personal Telehealth Platform | Github link

A comprehensive telehealth application designed to facilitate remote patient management, virtual consultations, and intelligent symptom analysis via an integrated chatbot.

Education