Siddartha Kodaboina

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Education

Master of Science, Software Engineering Aug 2023 - May 2025
San Jose State University: Cloud Computing, Distributed Systems, Software Platforms, Machine Learning. GPA: 4.0/4.0

Bachelor of Technology, Computer Science Jun 2017 – May 2021
JNTU University: Algorithms, Data structures, Database Management, Operating Systems, Computer Networks.

Technical Skills

Technologies: Python, Java, Springboot, Go, Ruby on Rails, Grafana, Kubernetes, Docker, FastAPI, Flask, React, Node.js
Tools: AWS(EC2, S3, Lambda, ECR, EKS, VPC, Cloudwatch, RDS, ElastiCache), Jenkins, Kafka, REST APIs
Databases: MySQL, DynamoDB, MongoDB, PostgreSQL, Redis

Experience

AppLogic Networks | Software Engineer II **Jul 2021 – Jul 2023**

Backend Engineer: Data Plane

- Scaled TCP/UDP/QUIC telemetry microservice to 1M events/sec using Python asyncio, Kafka partitioning, and Protobuf.
- Optimized REST API latency to <500ms via Redis Cluster + async LRU caching using TTL and write-through in FastAPI.
- Increased WebSocket handling to 20K+ sessions by tuning uvicorn workers and asyncio with Starlette for non-blocking I/O.
- Reduced query time by 70% using Vertica range partitioning, MPP joins, and async batch fetching with Python generators.
- Wrote 200+ unit & integration tests covering 80%+ of the codebase with Pytest, unittest.mock, and SonarQube CI in GitLab.
- Built 30+ reusable React components for network analytics dashboards, reducing UI development time per feature by 60%
- Implemented subscriber-level drilldowns by connecting Redux filter states, and async hooks for dynamic dashboard views
- Techstack: **Python, FastAPI, Kafka, Redis, PostgreSQL, Vertica, WebSockets, REST APIs, Kubernetes, ArgoCD, Pytest, GitLab CI/CD**

Backend Engineer: DevOps

- Reduced build time for QoE Metric Service from 8m to 2m by implementing multi-stage Docker builds and cache-friendly layers
- Ensured 99.99% uptime for QoE Metric Service under 1M+ events/sec by configuring K8s pod anti-affinity, and HPA
- Instrumented 20+ custom Prometheus metrics and Grafana panels to track API latency, WebSocket sessions, and Kafka lag
- Techstack: **Python, Docker, Jenkins, Prometheus, Grafana, Kubernetes, CI/CD, Linux, Make, JFrog**

Projects

Cli Tool: Distributed Jenkins Infrastructure (Github) | *Python, Jenkins, Docker, Webhooks, Make*

- Developed a cross-platform CLI tool to automate the setup of a distributed Jenkins CI/CD infrastructure with Dockerized master-agent architecture, reducing setup time by 95% through single-command deployment, secure GitHub integration, dynamic resource allocation, and persistent storage support.

K8s with Full Observability Stack (Github) | *Ruby on Rails, Docker, Kubernetes, Argo CD, Prometheus, Grafana*

- Developed and deployed scalable task management and email scheduling microservices using Ruby on rails, and Kafka, with secure tenant isolation, Kubernetes orchestration (AKS), multi-stage Docker builds, CI/CD automation via ArgoCD and GitHub Actions, and full observability through Prometheus and Grafana.

FlatMate Finder (Github) | (Live) | *React, TypeScript, NodeJs, PostgreSQL, MongoDB, EC2, Github Actions*

- Built a full-stack student accommodation platform with 10+ modular React components (Redux, useContext), implemented lazy loading and debouncing for performance, developed GraphQL and REST APIs with Node.js, used Azure PostgreSQL and MongoDB Atlas for structured and conversational data, and deployed via CI/CD on AWS EC2 using GitHub Actions.

Network traffic classification and analytics pipeline (Github) | *Python, FastAPI, Kafka, Elasticsearch, Grafana*

- Engineered a local machine web traffic classification and analytics pipeline using Wireshark, Python, FastAPI, Apache Kafka, ElasticSearch, and Grafana to inspect TCP/UDP/QUIC packets; extracted protocol, packet size, and hostname (SNI/DNS) metadata to classify traffic to domains like Amazon, YouTube, and Netflix.