

Abdeali Stationwala

Senior Software Engineer — Scalable Backend Systems

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WORK EXPERIENCE

Cleartrail Technologies

Dec 2021 – Present

Senior Software Engineer

Jul 2025 - Present

Authentication & Access Infrastructure

- Led development of an offline **MFA and OTP platform** in **Spring Boot**, integrating SIM-bank hardware via **MQTT** to support secure authentication in **air-gapped environments**; owned end-to-end design and mentored 3 engineers.
- Built a distributed **User Identity and RBAC system** across **Postgres and Solr**, implementing workflow-based consistency with rollback handling, reducing inconsistent state scenarios in production.
- Designed a **SIM slot allocation system** managing limited active capacity (k active out of n), enabling load-balanced OTP delivery with **automatic failover**, improving OTP delivery reliability under slot failures.

Real-Time Monitoring Platform

- Developed backend services supporting lifecycle operations for **500K+ entities**, handling high-frequency updates, concurrent processing, and scalability across distributed components.
- Built a **provisioning orchestration service** to generate and distribute filter configurations, reducing downstream inconsistencies and improving provisioning reliability across dependent systems.
- Restructured provisioning workflows into **modular stages** for validation, persistence, and indexing, reducing deployment-related defects and simplifying feature integration.

Software Engineer

Dec 2021 - Jun 2025

Distributed Data Processing Pipeline

- Built a **Python-based data processing service** to fetch and process large-scale updates from **Solr**, generating configuration artifacts consumed by downstream systems.
- Improved pipeline throughput by **35%** by introducing **multithreading**, optimizing CPU utilization, and tuning Solr queries for large result sets.
- Implemented **asynchronous job coordination using RabbitMQ**, enabling reliable acknowledgement tracking and fault-tolerant processing, reducing manual intervention in failure recovery.
- Deployed and managed services in **Dockerized Linux environments** with centralized logging with **syslog**.

KEY ACHIEVEMENTS

- Improved OTP delivery success rate from **85% to 97%** by designing a fault-tolerant SIM slot allocation and failover mechanism under constrained hardware capacity.
- Reduced cross-system data inconsistencies by **40%** by introducing workflow-based orchestration with rollback handling across Solr and PostgreSQL.
- Cut job failure recovery time by **50%** by implementing async processing and automated retry mechanisms using RMQ.
- Delivered production-grade systems in **air-gapped environments**, solving challenges around secure communication, deployment, and hardware integration.
- Recognized with **3× Star of the Month** and **Star of the Quarter** for consistent high-impact delivery and ownership of critical platform components.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, Bash

Backend: Spring Boot, Microservices Architecture, REST APIs

Distributed Systems: RabbitMQ, MQTT, Hazelcast, Event-driven systems

Data Stores & Search: PostgreSQL, MySQL, Apache Solr

Infrastructure: Docker, Linux, systemctl, NFS

Tools: Git, GitHub, IntelliJ IDEA, PyCharm, Postman, Jira

Cloud: AWS (EC2, S3), Azure (basics)

EDUCATION

Rajiv Gandhi Proudlyogiki Vishwavidyalaya

2017 - 2022

Master of Computer Applications (Dual Degree), **CGPA: 8.58**