Arun Sakthi Anand M

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Executive Summary

Software Engineer with 2.5+ years of experience owning and operating **distributed, low-latency backend systems** using Java and Spring Boot. Proven track record in designing **event-driven microservices**, real-time processing pipelines, and cloud-native platforms at scale, with measurable impact on performance, reliability, and cost efficiency.

Education

Bachelor of Technology in Electrical Engineering — Hyderabad, India
Indian Institute of Technology - Hyderabad — *Aug. 2019 - May. 2023*

- Elected President, led IIT Hyderabad's post-COVID reopening and major student/alumni initiatives.

Experience

Lead Engineer (Backend / Full-Stack) — June 2024 - Present
Air India — *Kochi, India*

- Modernized a mission-critical Spring Boot platform by upgrading from **Java 8 to 21** and **Spring 2 to 3**, improving p99 latency by **40%** and reducing garbage collection pauses by **95%** in production.
- Redesigned Air India's notification platform into a **decoupled**, **event-driven architecture** using Azure Service Bus with priority topics and DLQs, increasing throughput from **30** to **75** TPS while improving fault isolation.
- Built a push notification microservice using asynchronous pipelines with FCM and APNs, replacing external vendors and achieving **60% infra cost savings** while maintaining high reliability and scalability.
- Re-architected the backend and datastore of the Preference Management System by replacing Couchbase with MongoDB and Redis, **reducing infrastructure costs from 1.6L to 85K**, and built an Angular interface enabling users to update preferences through a streamlined UI.
- Developed a **Notification Dashboard** using Angular, with secure RBAC and reducing campaign launch cycles from hours to minutes by eliminating direct database operations and enabling self-service workflows.

Software Development Engineer Trainee — June 2023 - May 2024
Air India — *Kochi, India*

- Received **High Flyer Award** for contributions in migrating core backend services during the **Air India-Vistara integration**, scaling systems to multi-terabyte datasets and ensuring consistency, zero-downtime rollouts, and reliability across distributed microservices.
- Led the upgrade of large-scale frontend applications from **Angular 13 to 18**, improving build stability, performance, and long-term maintainability across multiple teams.
- Developed a serverless Web Performance Monitoring platform using Node.js (v16+), TypeScript, Azure Functions, PostgreSQL, and Playwright automation to track Core Web Vitals and deliver real-time performance analytics and competitive benchmarking for Air India's digital transformation.

Projects

Interview Organizer Platform (Live Demo) | *Spring Boot • Angular • MongoDB • AWS* — 2025 - Present

- Designed and deployed a production-grade cloud architecture on AWS using Elastic Beanstalk, S3, CloudFront, and MongoDB Atlas, achieving **99.9% uptime** with global low-latency access.
- Implemented secure authentication with JWT (access/refresh), Spring Security, and Angular interceptors, and optimized frontend performance using signals, OnPush change detection, and lazy loading for faster load times.
- Implemented CI/CD with GitHub Actions using parallel jobs, environment-specific pipelines, artifact caching, and automated CloudFront invalidation.

Technical Skills

Programming Languages: Java, TypeScript, JavaScript
Frameworks & APIs: Spring Boot, Spring Security, RESTful APIs, Node.js, Angular
Distributed Systems: Microservices, Event-Driven Architecture, Asynchronous Messaging
Databases & Caching: PostgreSQL, MongoDB, Redis
Messaging Platforms: Kafka, Azure Service Bus, Azure Event Hub
Cloud & DevOps: Docker, Kubernetes, AWS, Azure, CI/CD (GitHub Actions)

Achievements

JEE Mains AIR 737; JEE Advanced AIR 1255; KVPY Scholar (AIR 144); NTSE Scholar