Arun Sakthi Anand M

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EDUCATION

Bachelor of Technology in Electrical Engineering   Hyderabad, India
Indian Institute of Technology – Hyderabad   *Aug. 2019 – May. 2023*
- Elected President of the Student Gymkhana, leading IIT Hyderabad's post-COVID reopening, establishing key student and alumni initiatives, and launching institute-wide cultural, tech, and sports programs.

EXPERIENCE

Lead Engineer(Full-Stack), *Air India (Tata Group)*   June 2024 – Present
- Built a high-throughput, distributed push-notification microservice using Spring Boot, Firebase, APNs, achieving **3x lower latency** and **60%** infra cost reduction through non-blocking I/O and batched message pipelines.
- Re-architected the Preference Management System using PostgreSQL + Redis, replacing Couchbase and cutting infra costs from 1.6L to 85K while improving lookup performance by 30% via optimized data modeling and cache-first access patterns.
- Designed a self-service **Notification Dashboard**, integrating backend APIs with secure RBAC and reducing campaign launch cycles from hours to minutes by removing direct DB operations.

Software Development Engineer Trainee, *Air India (Tata Group)*   June 2023 – May 2024
- 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.
- Enhanced the airline search experience by developing UI components (StencilJS + Angular) and leading the upgrade from **Angular 13 to 18**, improving stability, performance, and maintainability.
- Upgraded a legacy service from **Java 11 to Java 21**, eliminating redundant DB calls and adopting virtual threads to improve concurrency, boost throughput, and reduce system load under peak traffic.

Software Developer Intern, *KPIT Technologies*   May 2022 – July 2022
- Worked on **QEMU Spice Protocols** for remote VM access.

PROJECTS

Interview Organizer Platform (Live Demo) | *Spring Boot • Angular 20 • MongoDB • AWS*
- Developed a scalable interview management system using **Spring Boot 3.5**, **Angular 20**, and **MongoDB**, exposing 50+ REST APIs with multi-tenant access control and secure RBAC.
- Designed cloud architecture with AWS Elastic Beanstalk, S3, CloudFront, and MongoDB Atlas, delivering **99.9% uptime**, auto-scaling, and globally low-latency API responses.
- Implemented secure auth with **JWT** (access/refresh), Spring Security, BCrypt hashing, and method-level authorization; added Angular HTTP interceptors for seamless session handling.
- Built analytics workflows using **MongoDB aggregation**, optimized Angular performance with signals, OnPush, and lazy loading, and implemented secure S3 file access via presigned URLs.
- Set up CI/CD with **GitHub Actions** using parallel jobs, environment-specific pipelines, artifact caching, and automated CloudFront cache invalidation.

Voice-Controlled Toy Car | *Deep Learning • Signal Processing • Python • Arduino*
- Built voice-driven toy car executing via an **LSTM** model (90% accuracy) using **MFCC**-based audio features.
- Integrated ML inference with Arduino to control DC motors through H-bridge circuit, demonstrating end-to-end hardware–AI integration.

TECHNICAL SKILLS

Backend & APIs: Java, C/C++, Spring Boot, Spring Security, JPA/Hibernate, Microservices
Frontend & UI: Angular, React, StencilJS, TypeScript, JavaScript
Datastores & Messaging: PostgreSQL, MongoDB, Redis, Apache Kafka, Azure Service Bus
DevOps & Cloud: Docker, Kubernetes, AWS (S3, EB, EC2, CloudFront), GitHub Actions

ACHIEVEMENTS

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