Adarsh Kumar

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PROFESSIONAL SUMMARY

Software Engineer with 3 years of experience in ***developing***, ***testing*** & ***optimising full-stack applications***. Proficient in **Java**, **Kotlin**, **Spring Boot** and **Node.js** for backend development, **React** and **Javascript/Typescript** for frontend interfaces. Demonstrated expertise in implementing scalable microservices, and increasing operational efficiency. Adept at working in fast-paced, agile environments.

WORK EXPERIENCE

Associate Software Engineer

Yara International, Bengaluru *AUGUST 2022 - PRESENT*

- Developed and maintained scalable backend microservices using **Kotlin** and **Spring Boot** in an event-driven architecture.
  - Implemented Kafka Producer and Consumer with Dead Letter Queue (DLQ) using Spring Cloud Stream Kafka Binder for efficient event processing.
  - Designed AVRO schemas to standardise data interchange conventions.
  - Achieved asynchronous enrichment of records using Kafka, such as field area calculation and country detection from farm boundaries, improving processing efficiency.
- Developed a Spring Boot wrapper service over REST APIs to mimic event driven architecture.
  - Utilised FeignClient and WebClient for API integration, reducing time and effort by 90% with a generalised WebClient approach.
  - Developed a robust error handling strategy, enhancing log clarity across multiple services.
- Created an admin dashboard using **React**, **AdminJS**, and **Sequelize** to provide comprehensive data visibility.
  - Developed custom components for JSON data visualisation, file downloads, timeseries data charts using recharts, and interactive maps with Mapbox and react-map-gl.
  - Reduced application response times by 25% through optimised database queries, using joins, creating views and indexing strategies.
- Employed CQRS pattern with **NestJS** and **TypeScript** to develop scalable and performant APIs.
  - Built CRON jobs for scheduled event processing to improve system reliability.
  - Implement message compression in Kafka, reducing message size by up to 84%, optimising network.
  - Integrated file upload functionality in REST client calls using Axios, improving data handling efficiency.

Trainee Software Engineer

Yara International, Bengaluru *AUGUST 2021 - JULY 2022*

- Hands-on experience in building & maintaining microservices in **Spring Boot, Kotlin, Java**.
  - Designed efficient database schemas, including complex queries & indexing strategies leveraging Spring Data JPA for simplified operations.
  - Implemented comprehensive error handling and logging strategies to improve troubleshooting.
  - Integrated Spring Security to enforce authentication mechanisms for securing endpoints.
  - Worked on features like - pagination on response, soft/hard delete records, dockerize application, layered systems, caching using Redis, integrate Feign Clients, API docs using Swagger schema etc
- Worked on Client-Server architecture with RESTful APIs utilising **NestJS, TypeScript**.
  - Generate migration and seeding scripts for data storage in PostgreSQL using TypeORM for simplified operations & enhanced maintainability.
  - Worked on features like - upload files to Amazon S3, apply validations on inputs etc.
- Convert Figma wireframes of components to functional code. Add SVGs for icons & various buttons to the **React** components library. Fixed bugs identified during Bug Bash to improve the user interface.

SKILLS

FRAMEWORKS: Spring Boot, React, Node.js, NestJS, Express
LANGUAGES: Java, Kotlin, Javascript, Typescript, Python
DATABASE/ORM: MySQL, PostgreSQL, Hibernate, TypeORM, Sequelize
OTHERS: Quarkus, Kafka, Redis, Docker, AWS, Testcontainers, Gradle, Maven, GraphQL, GitHub Actions

ACADEMIC DETAILS

Bachelor of Engineering, Electronics and Telecommunication Engineering *AUGUST 2017 - JULY 2021*
BMS College of Engineering, Bengaluru CGPA - 8.3/10

Senior School (12th), CBSE(PCM + Python) *MARCH 2016*
Amity International School, Saket, New Delhi PERCENTAGE - 79

Secondary School (10th), CBSE *MARCH 2014*
Foundation School, Buxar CGPA - 10/10

ACADEMIC PROJECTS

Emotion Recognition from Facial Expression using CNN (published research paper) *JULY 2021*
Capable of detecting emotions in real time using Facial Expressions based on CNN Architecture. Recognised emotions - Anger, Disgust, Fear, Happy, Neutral, Sad & Surprise. Accuracy (training/validation): 90.3%/70.06%

Remote Weather Monitoring System *DECEMBER 2020*
Embedded System consisting of Sensor devices & Wireless communication using Arduino & ESP8266. Measured & Recorded Temperature, Humidity, CO and Pressure values. Saved locally and in the cloud also.