Abhishek Ramchandani

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Experience

Software Engineer II Sep 2024 – Present
Tritorc | Python, FastAPI, AWS, Airflow, Kafka, pSQL *Pasadena, TX*

- Replaced manual logging within ERPs with a real-time logistics platform using Python FastAPI for RFID-based tagging/tracking, leveraging Kafka Streams for event-driven updates and AWS SQS for reliable alerts
- Enhanced inventory accuracy by 58% using real-time RFID tracking via AWS IoT Core/Kafka, applying deduplication in PostgreSQL, processing updates via Apache Airflow, syncing structured data to SAP S/4HANA on AWS Fargate
- Developed a centralized Bill of Materials (BOM) generation, retrieval & comparison tool for key stakeholders within the platform. Optimized traversal with Redis caching & precomputed SQL paths, reducing query time from 70s to 9s
- Reduced bottlenecks by 20% by enabling anomaly detection instead of reactive monitoring. Built ETL pipelines using AWS Glue, AWS Lambda, and Kinesis, processing order updates and RFID dropouts to improve supply chain predictability
- Currently building a chatbot to automate shipment related queries and support ticketing, reducing manual escalations. Using LLama, FastAPI, RAG, and Elasticsearch, with real-time shipment API integration, aiming to improve response times by 40%

Software Engineer Intern May 2023 – Aug 2023
Tritorc | Java, Jakarta EE, MySQL *Pasadena, TX*

- Developed secure SOAP APIs using Java and Jakarta EE, to access manufacturing updates within MySQL, achieving an uptime of 98% with improved data accessibility for 50+ concurrent users
- Identified bottlenecks in MySQL queries and implemented indexing and request batching, improving data retrieval speeds by 37%
- Built automated test scripts within Jenkins CI/CD pipelines, performing role-based access control testing to ensure secure API functionality. Improved compliance with enterprise standards and increased test coverage by 40%

Founding Software Engineer Nov 2019 – Jul 2022
FORKD.in | Java, Spring Boot, AWS, ReactJS, PostgreSQL *Mumbai, IN*

- Developed REST APIs using Java and Spring Boot, directing a scalable platform for private chefs from conception to 1.n stage, improving service efficiency by a significant margin
- Optimized frontend with ReactJS (Redux, Hooks, server-side rendering), reducing load times by 34% and boosting user engagement by 70% for seamless bookings
- Designed an event-driven architecture with Docker, RabbitMQ, and PostgreSQL on AWS EC2, reducing inter-service latency and ensuring reliable booking updates
- Leveraged Prometheus and Grafana dashboards, tracking latency and error rates to support proactive scaling
- Achieved 90% code coverage using JUnit and Mockito, ensuring reliable and high-quality delivery of the platform

Technical Skills

Languages & Frameworks: Java, Python, JavaScript, TypeScript, SQL; React, Node.js, Spring Boot, Django, GraphQL
Cloud Services: AWS S3, EC2, CodePipeline, Lambda, IoT Core, Azure Data Factory, Google Cloud Platform
Database Technologies: MySQL, SQLite, Azure SQL, PostgreSQL, MongoDB, Redis, DynamoDB, CassandraDB
ML Libraries: PyTorch, TensorFlow, Keras, Sklearn, Pandas, Hugging Face, SHAP, spaCy
Developer Tools: Postman, Git, Docker, Kubernetes

Education

Northeastern University Boston, MA
Master of Science in Information Systems *May 2024*

University of Mumbai Mumbai, India
Bachelor of Engineering in Information Technology *Oct 2020*

Projects

AI-Driven SaaS Email Client | *NextJS, Aurinko, OpenAI, PostgreSQL* [Github]

- Deployed an AI-powered client, integrating Aurinko API and Stripe for seamless email management and SaaS payments
- Built a scalable backend using Prisma & PostgreSQL, utilizing OpenAI Edge for LLM integration

3D Soccer Vision Analysis | *Python, YOLOv8, OpenCV, AWS S3, Git* [Github]

- Implemented real-time object detection with Ultralytics and YOLO, enhancing player segmentation accuracy by 30% using KMeans and conducting 3D scene analysis with OpenCV
- Developed ball trajectory interpolation algorithms employing polynomial regression and Kalman Filtering, resulting in a 25% improvement in predictive accuracy

Task Management App | *React, Typescript, Prisma, PostgresQL, Tailwind* [Github]

- Engineered a task management with priority filtering and real-time search, cutting load times by 58% through memoization
- Enhanced responsiveness with asynchronous optimistic updates, minimized re-renders, and comprehensive error boundaries for seamless user interaction