HASSAN ABRAR

Senior Backend Engineer | Distributed Systems & Multi-Tenant Architecture

Lahore, Pakistan | Open to Remote (EU / US-East overlap)

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PROFESSIONAL SUMMARY

Senior backend engineer with 5+ years building and operating production systems across enterprise fintech, adtech, and high-volume SaaS. Works across both major backend ecosystems: Java/Spring Boot and Node.js/TypeScript, with depth in event-driven microservices, multi-tenant architecture, and real-time data pipelines. Led the decomposition of a monolithic platform into 12 production microservices, architected multi-tenant infrastructure supporting 1,000+ isolated tenant databases at 99.9% uptime, and mentored 5+ engineers through code review, architecture guidance, and delivery. Experienced working remotely with distributed teams across Saudi Arabia, Europe, and North America.

TECHNICAL SKILLS

Languages: Java, JavaScript, TypeScript, Python, SQL

Backend: Spring Boot, Node.js, Express.js, NestJS, Flask, Django

Architecture: Microservices, Event-Driven Architecture, Multi-Tenant Architecture, Distributed Systems, System Design, REST APIs, GraphQL, WebSockets

Messaging and Streaming: Apache Kafka, NATS, JMS, Redis Bull, Socket.io

Databases: PostgreSQL, MySQL, Oracle, MongoDB, Redis, DynamoDB

Cloud: Amazon Web Services (AWS) - EC2, S3, Lambda, RDS, CloudWatch; Google Cloud Platform (GCP)

DevOps and CI/CD: Docker, Kubernetes, Jenkins, GitHub Actions, IBM UrbanCode Deploy, Git

Observability: Splunk, Google Cloud Logging, AWS CloudWatch, ELK Stack

Security and API Management: OAuth2, JWT, Apigee API Gateway

Frontend and Mobile: React.js, Redux, Tailwind CSS, React Native, Expo

Practices: Agile, Scrum, Code Review, Technical Mentoring, Test-Driven Development

PROFESSIONAL EXPERIENCE

Senior Backend Engineer (Contract) | Mission.dev

Remote - Riyadh, Saudi Arabia | 05/2025 - Present

Client: Masdr, an enterprise fintech and payroll platform serving large Saudi Arabian employers.

- Own end-to-end delivery of features across Spring Boot microservices in a multi-tenant, multi-database architecture supporting enterprise payroll.
- Design asynchronous, event-driven JMS pipelines for payroll processing, bank verification, and inter-service communication.
- Manage API lifecycle through Apigee Gateway, including rate limiting, authentication and authorization policy, and request/response validation.
- Drive observability improvements by building Splunk dashboards and alerting, reducing time to diagnose production payroll and verification incidents.
- Extend tenant configuration and data isolation logic as new enterprise tenants are onboarded.
- Partner with senior engineers across teams on code review, architecture discussion, and cross-team feature planning.
- Deliver releases through Jenkins and IBM UrbanCode Deploy across DEV, UAT, and PROD, including WebLogic configuration and deployment validation.

Senior Software Engineer | Southville Solutions

Lahore, Pakistan | 02/2023 - Present

- Led the decomposition of a monolithic platform into 12 production microservices, improving deployment velocity, scalability, and fault isolation.
- Architected multi-tenant backend infrastructure supporting 1,000+ isolated tenant databases with dynamic schema resolution and automated tenant provisioning, sustaining 99.9% uptime.
- Built a high-throughput booking and scheduling platform on NestJS and MongoDB handling 10,000+ daily transactions.
- Improved API response times by 40%+ through Redis caching, query optimization, and redesigned service communication patterns.

- Designed JMS-based event pipelines for salary disbursement and attendance processing across multi-tenant payroll and HR systems.
- Designed and implemented a centralized observability stack across Google Cloud Logging, AWS CloudWatch, and Splunk, reducing incident detection and resolution time by 60%.
- Led cross-platform mobile delivery in React Native and Expo, achieving 95%+ crash-free sessions across iOS and Android.
- Mentored 5+ engineers through code review, architecture guidance, and onboarding, raising code quality and delivery consistency across the team.

Associate Software Engineer | Stack Intel .IO

Lahore, Pakistan | 05/2021 - 01/2023 (promoted from Software Engineer Intern, 03/2021 - 05/2021)

- Built a real-time chat system on Node.js, Express.js, WebSockets, and Redis Pub/Sub supporting 10,000+ concurrent users at a 99.8% message delivery rate.
- Implemented real-time push notification delivery using Socket.io and Redis Streams at sub-100ms latency.
- Developed scalable REST APIs across Node.js, PostgreSQL, MongoDB, and Redis, reducing load through optimized query patterns and caching.
- Integrated Stripe payment workflows with zero security incidents across all payment paths.
- Built dashboards and UI features in React.js, Redux Toolkit, and Tailwind CSS, improving user engagement by 25%.
- Established automated testing with Jest, Mocha, and Supertest, reaching 85% code coverage and reducing defects by 45%.
- Improved CI/CD reliability using GitHub Actions and Docker, enabling more consistent deployments.
- Mentored junior developers on React, clean code practices, and front-to-back integration.

TECHNICAL PROJECTS

ClickFortify - Real-Time Ad Fraud Detection Platform (Independent Project)

- Sole architect and operator of a multi-tenant, event-driven platform that detects and blocks invalid ad traffic across Google Ads and Meta Ads in real time.
- Built behavioural scoring, device fingerprinting, and VPN, proxy, and datacenter traffic filtering, with automated IP exclusion sync back to advertiser ad accounts.
- Designed event-driven microservices over NATS with Redis Bull job queues on Node.js, TypeScript, MongoDB, and Next.js.
- Planned and executed a live production database migration across 500+ tenant databases at near-zero downtime.

VoxRange - Voice AI and Call Analytics Infrastructure

- Built production voice AI infrastructure covering real-time telephony, speech-to-text, and custom text-to-speech model training on self-hosted GPU.

CoreDirection - Corporate Wellness and Health Engagement Platform

- Delivered backend services, web platform, and React Native mobile app for a global wellness ecosystem used by organisations including Dubai Sports Council and Expo 2020. Vue.js, NestJS, Node.js, Redis Bull, multi-tenant architecture.

Lytics - PEMRA Media Monitoring and Intelligence Platform

- Built an enterprise multimedia content management and regulation system for the Pakistan Electronic Media Regulatory Authority, covering live video ingestion and clipping, automated Urdu and English transcription and translation, metadata tagging, and real-time oversight dashboards. Node.js, React.js, MongoDB, PostgreSQL.

Prismfly - Ecommerce Optimization Browser Extension

- Built a Chrome extension powering conversion rate optimization and analytics for 100+ DTC brands, with injected scripts for A/B testing on Shopify and custom storefronts. Vanilla JavaScript, React.js, Node.js, Chrome Extension APIs.

LEADERSHIP

Developer Head | MSP Community, University of Lahore

Lahore, Pakistan | 10/2021 - 04/2022

- Led the developer track for the university technology community, running technical sessions and supporting student engineers on practical development work.

EDUCATION

Bachelor of Science in Computer Science

The University of Lahore, Lahore, Pakistan