Harsh Kumar

Software Engineer | Java & Spring Boot | Microservices | AI-Assisted Development | AWS | Full Stack

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Professional Summary

Software Engineer with 3 years of experience building scalable Java microservices, cloud-native applications, and CI/CD pipelines across aviation and enterprise domains. Experienced in leveraging AI-assisted development tools (Amazon Q Developer, GitHub Copilot) for code quality, debugging, legacy refactoring, and building AI-powered automation that cut manual QA effort by up to 80%. Skilled in Spring Boot, Angular, React, AWS, Docker, Kubernetes, and Terraform. Delivered 40% improvement in system reliability, 50% reduction in deployment time, and 60% decrease in security vulnerabilities through hands-on backend, DevOps, and full-stack engineering.

Technical Skills

Languages & Frameworks: Java, JavaScript, Spring Boot, Spring MVC, Angular, React, JUnit, JWT, REST APIs, Microservices, Architecture

AI-Assisted Development: Amazon Q Developer (codebase debugging, refactoring, code quality analysis), GitHub Copilot (code suggestions, boilerplate generation), copilot-driven development workflows

Cloud & DevOps: AWS (EC2, S3, Lambda, CloudWatch), GCP, Azure, Docker, Kubernetes, Terraform, GitHub Actions

Core Concepts: System Design, Low-Level Design (LLD), Object-Oriented Programming (OOP), Data Structures & Algorithms, MySQL, Agile/Scrum

Developer Tools: Git, GitHub, VS Code, Postman, IntelliJ IDEA

Professional Experience

Software Engineer | Coforge May 2024 - Present

- Improved microservices with Spring Boot and Java design patterns, optimizing inter-service latency by 30% and improving data pipeline throughput.
- Streamlined AWS infrastructure solutions using Lambda, increasing system reliability by 40% and minimizing unplanned downtime by 35%.
- Designed and implemented CI/CD pipelines using GitHub Actions, cutting release cycle time by 50% and enabling zero-downtime deployments.
- Contributed to **British Airways Touchpoints CUSS kiosk** by migrating backend from Java 8 to Java 17 and frontend from Angular 8 to Angular 21, mitigating security vulnerabilities by 80% and improving backend self-service success rate by 11%.
- Built an **AI-powered bulk test booking tool** (Angular, AI chat, Python) using **Amazon Q Developer** to accelerate development, automating airport-based QA test bookings for the British Airways ecosystem and reducing manual QA turnaround time by ~70-80% (weeks down to days).
- Leveraged **Amazon Q Developer and GitHub Copilot** for debugging, code quality analysis, and refactoring legacy code across sprint cycles, accelerating issue resolution.
- Contributed to **end-to-end solution design** for cloud-native full-stack applications, aligning architecture decisions with SDLC, security, and performance standards while embedding AI-assisted development workflows to accelerate delivery.
- Collaborated with cross-functional Agile teams to deliver secure, scalable features across multiple sprint cycles.

Full Stack Developer | Reachify Nov 2023 - May 2024

- Redesigned 3 flagship web properties using component-based frontend architecture, increasing user engagement by 30% and conversion rates by 25%.
- Refined server-side distributed caching strategies, eliminating average page load time by 40% and improving user retention across key user segments.
- Collaborated with backend engineers and product managers to translate business requirements into scalable, customer-centric web experiences.

Projects

FraudShield — Real-Time Fraud Detection Platform

Tech Stack: Java 21, Spring Boot 4.1, Spring Security 6, Spring Cloud (Eureka), React, Vite, H2, JWT, Maven

- Built a full-stack fraud-detection system that ingests payment transactions, scores them against a configurable multi-rule engine, and flags suspicious activity in real time, modeling production payment fraud detection.
- Designed secure REST APIs with JWT authentication, single-use refresh-token rotation, and BCrypt password hashing, enforcing role-based access control (RBAC) across four roles with method- and URL-level authorization.
- Implemented a weighted fraud rules engine covering velocity, amount anomalies, geo-mismatch, and duplicate detection, computing composite risk scores and automatically flagging transactions above configurable thresholds.
- Developed a React + Vite analyst dashboard featuring authentication, KPI metrics, searchable transaction tables, verdict overrides, rule management, audit logs, and dark/light themes.
- Integrated Netflix Eureka service discovery, enabling backend services and the UI to register with a central registry and demonstrating a microservices-ready architecture.
- Engineered a configuration- and header-driven data-mode toggle (`X-Mock-Response`) to serve mock or live data, and created a Postman collection for injecting real transactions through REST APIs.
- Created an interactive, standalone HTML architecture guide documenting the system end-to-end, including HLD, C4 diagrams, security flows, and an embedded assistant.

DevOps Pipeline with Cloud Monitoring

Tech Stack: Java, Spring Boot, Docker, Kubernetes, Terraform, AWS (EC2, S3, CloudWatch), GitHub Actions

- Built a production-grade Spring Boot REST API and containerized it using Docker, reducing environment-specific failures by 40% across development, staging, and production.
- Authored Terraform scripts to provision AWS infrastructure (EC2, S3, CloudWatch), cutting manual setup time by 80% and enabling fully repeatable deployments.
- Configured a multi-stage CI/CD pipeline using GitHub Actions with integrated testing, Docker image builds, and sequential environment promotion, enabling zero-downtime releases.
- Integrated Prometheus metrics and Grafana dashboards to monitor API latency, error rates, and resource usage in real time, accelerating incident detection by 60%.
- Optimized Kubernetes deployments with auto-scaling and liveness probes, maintaining 99.9% uptime under variable traffic loads.

Loom Genie - Browser-Based Screen Recording Platform

Tech Stack: React, Node.js, Express.js, Puppeteer, Worker.js, Azure

- Developed a browser-native screen recording tool using React and Puppeteer, enabling programmatic capture and playback and improving user workflow efficiency by 40%.
- Leveraged Web Workers to offload recording tasks from the main UI thread, preventing blocking and increasing feature adoption by 20% through a smoother user experience.
- Deployed the recording pipeline on Azure, driving down session failure rates by 30% and improving overall platform reliability.

Education

NOIDA INSTITUTE OF ENGINEERING TECHNOLOGY — Dec 2020 - Aug 2024

B. Tech in Computer Science, CGPA: 8.3 — Greater Noida, UP

Certifications & Achievements

- **Google Cloud Associate Cloud Engineer** - Google Cloud SkillBoost
- **Create and Manage Cloud Resources** - Google Cloud SkillBoost
- **Elastic Google Cloud Infrastructure: Scaling and Automation** - Coursera