

Muhammed Shemeel

Lead Software Engineer · Fintech & CBDC

📞 (+971) 568224992 ✉️ mshemeel001@gmail.com 🔗 linkedin.com/in/mshemeel007
🌐 mshemeel.com 📍 Dubai, United Arab Emirates



PROFILE SUMMARY

Experienced Full Stack Java Developer with over 8+ years of expertise architecting, developing, and maintaining scalable, high-performance enterprise applications using microservices architecture and AI-powered development tools. Currently a core engineer on the UAE Central Bank's retail CBDC (Digital Dirham) platform — an event-driven Java 25 / Spring Boot wallet system with multi-realm Keycloak IAM and Vault-backed post-quantum cryptography. Previously helped launch the UAE's first Apple Tap to Pay (SoftPOS) solution at Network International. Proficient in translating business requirements into technical solutions, with extensive experience in hybrid cloud deployments, DevOps practices, and cross-functional collaboration. Known for strong problem-solving skills, peer code reviews, and delivering secure, observable solutions aligned with business needs.

SKILLS

Languages & Frameworks: Java (8–25), Go Lang, JavaScript, TypeScript, Spring Boot 4, Spring Cloud, Spring Security, Spring WebFlux, Quarkus, Hibernate
Architecture: Microservices / Micro Frontend with functional programming paradigms, event-driven design (Apache Kafka), REST & GraphQL APIs
Frontend: React JS, React Native, Redux, TypeScript, HTML/CSS
Security & Identity: Keycloak (multi-realm), OAuth 2.0 / OIDC, mTLS, HashiCorp Vault, Post-Quantum Cryptography (ML-DSA-87, ML-KEM-1024), Active Directory / LDAPS, PCI DSS
AI Development Tools: Cursor, Claude, ChatGPT, GitHub Copilot, Lovable — code generation, debugging, and automated testing
DevOps & Cloud: Docker, Kubernetes, OpenShift, Azure & AWS, Terraform, Jenkins, CI/CD & GitOps, Apache APISIX
Observability: OpenTelemetry, Prometheus, Grafana, Loki, Tempo, ELK Stack, k6
Databases: Oracle, MySQL, PostgreSQL, MongoDB, Redis
Testing: JUnit, Mockito, Cucumber (BDD)
Collaboration & Tools: Jira, Confluence, Slack, Maven, Gradle, Git, Bitbucket, Agile / Scrum / Kanban

WORK EXPERIENCE

**Takamul AI**
Senior Software Engineer

Jan. 2026 – Present
Dubai, UAE

Product: Core engineer on the CBUAE retail CBDC (Digital Dirham) platform — a production-grade digital-currency wallet ecosystem for the UAE Central Bank, spanning an event-driven backend, a React Native wallet app, an institutional portal, cryptography, IAM, and API-gateway performance.

Roles and Responsibilities:

- Built core backend services for the retail CBDC wallet platform (Java 25, Spring Boot 4, 16-module Gradle build): wallet lifecycle, P2P / P2M / top-up / withdrawal flows, and an event-driven Kafka transaction pipeline with AOP-based idempotency and optimistic locking.
- Designed and published a Vault-backed cryptography library offering HashiCorp Vault Transit encryption/signing plus hybrid classical + post-quantum (ML-DSA-87 / ML-KEM-1024) signatures, with crypto-agility (runtime algorithm hot-swap) and a circuit-breaker / retry resilience layer — released as a reusable Spring Boot starter adopted platform-wide.
- Engineered multi-realm Keycloak IAM, including federation of CBUAE operators from on-premises Active Directory over LDAPS with group-to-role mapping, scheduled sync, account-disable detection, and TOTP MFA across per-LFI realms.
- Architected the platform's programmable-wallet layer — Smart Parent (parent-child) and MoCE Smart Social (government welfare disbursement) wallet flows on an embedded Lua smart-contract sandbox enforcing spend rules, allowlists, and disbursement caps deterministically without platform code changes.
- Executed an Apache APISIX vs IBM API Connect gateway benchmark on Azure AKS (k6, Terraform, Go mock backend) — sustaining ~32.5K TPS at 8 pods with 0% errors — and implemented end-to-end observability with OpenTelemetry, Prometheus, Grafana, Loki, and Tempo.

Tools & Technologies: Java 25, Spring Boot 4, Spring Security, Apache Kafka, PostgreSQL, Redis, Keycloak (multi-realm), HashiCorp Vault, Post-Quantum Cryptography (ML-DSA-87 / ML-KEM-1024), BouncyCastle, OAuth 2.0 / OIDC, mTLS, Active Directory / LDAPS, React Native, React, TypeScript, Apache APISIX, Docker, Kubernetes / OpenShift, Azure AKS, Terraform, OpenTelemetry, Prometheus, Grafana, k6, Flyway, Gradle

**Network International LLC**
Technical Specialist

Aug. 2023 – Dec. 2025
Dubai, UAE

Product: N-Genius One is a digital acceptance solution supporting multiple payment methods in a single mobile app — Pay-by-QR, Pay-by-Link, Tap-To-Pay (iOS & Android), and Create Invoice.

Roles and Responsibilities:

- Spearheaded the Apple Tap to Pay launch in the UAE as the first regional provider, architecting scalable microservices with functional programming principles and upgrading critical systems (Keycloak, Java, Spring Boot) for enhanced performance and security.
- Contributed to enterprise-grade hybrid cloud solutions with multi-region scalability and comprehensive observability using Grafana, Prometheus, and ELK, and supported implementation of GitOps practices for automated deployment pipelines across distributed microservices.
- Delivered comprehensive technical solutions by translating business requirements into scalable architectures, developing RESTful APIs with Java Spring Boot and Swagger, and building high-performance mobile features using React Native and Redux.
- Led high-performing development teams through Agile / Kanban methodologies, conducting code reviews, mentoring junior developers, and consistently delivering timely solutions while maintaining high system availability in production.
- Boosted development efficiency by 50% through AI-powered tools for code generation, debugging, and unit testing, while establishing testing frameworks with QA teams using JUnit, Mockito, and Cucumber BDD.
- Architected the My Network app backend (Spring Boot / Java): Keycloak & PKCE authentication, user onboarding, a push-notification engine, migration of existing auth to PKCE, and integrations with 3rd-party APIs.

Tools & Technologies: Java, Kotlin, JavaScript, Spring Boot, Spring Cloud, Spring-Data-JPA, Quarkus, React JS, React Native, OAuth, Keycloak, REST, Kafka, Kafka-streams, Swagger, Consul, Maven, Jenkins, Docker, Kubernetes, Git, Bitbucket, MySQL, MongoDB, JUnit, Mockito, Prometheus, Kibana. AI Tools: Cursor, Lovable, ChatGPT, Claude, Ollama

**LT Mindtree**
Specialist – Software Engineering

Mar. 2022 – Jul. 2023
Coimbatore, TN, India

Client: Allegiant Air — as part of the Navitaire initiative, the legacy booking system is deprecated and upgraded to a new microservices architecture to integrate with Amadeus Navitaire.

Roles and Responsibilities:

- Designed and developed scalable microservices and micro frontend solutions adopting functional programming styles, implementing RESTful web services using Spring Boot with comprehensive Swagger API documentation.
- Ensured high code quality through comprehensive unit testing using JUnit and Mockito, implementing best practices including design patterns, modularization, and refactoring for maintainable codebases.

- Led Agile development initiatives using Scrum and Kanban methodologies, conducting thorough code reviews and mentoring junior developers to ensure adherence to coding standards.
- Collaborated effectively with QA teams to identify and resolve defects, and engaged directly with customers to understand business requirements and resolve production issues efficiently.

Tools & Technologies: Java, Spring Boot, Spring Cloud, Spring-Data-JPA, Spring-WebFlux, REST, Kafka, Kafka-streams, GraphQL, Swagger, Consul, Maven, Jenkins, Docker, OpenShift, SonarQube, Fortify, JBoss, Tomcat, Git, Bitbucket, MySQL, JUnit, Mockito, Jira, Confluence



IBS Software Pvt Ltd
Senior Product Engineer

Apr. 2019 – Mar. 2022
Cochin, KL, India / Tokyo, Japan

Product: iCargo implementation for Japan Airlines (JAL) — a comprehensive cargo management system providing end-to-end cargo lifecycle visibility from booking to delivery, built on a modern microservices architecture with APIs and cloud computing.

- Roles and Responsibilities:**
- Collaborated with cross-functional teams including customer, product management, and QA to translate business needs into technical solutions and ensure high-quality product delivery through Agile methodologies.
 - Architected and developed new features for the iCargo operations module, creating scalable solutions meeting customer requirements while ensuring optimal performance and reliability.
 - Built responsive user interfaces using modern front-end technologies including JSP, JavaScript, ReactJS, and Redux, delivering seamless user experiences across the iCargo platform.
 - Developed robust backend services by implementing RESTful web services using Java and Spring, ensuring seamless integration between UI and backend systems with proper API architecture.

Tools & Technologies: Java, JavaScript, Spring Boot, Spring-Data-JPA, ReactJS, Redux, REST, Swagger, Jenkins, Docker, SonarQube, WebLogic, JBoss, Tomcat, Git, Bitbucket, Oracle SQL, PostgreSQL, JUnit, Mockito, Jira, Confluence



Allianz Technology
Software Engineer

Sep. 2017 – Apr. 2019
Trivandrum, KL, India

Client: Allianz UK Claims (Global Digital Factory) — architected an integration platform of 15 web services connecting Angular and AEM frontends to Guidewire Claims Center and Coronet systems through JSON-to-SOAP/REST translation services.

- Roles and Responsibilities:**
- Engineered robust REST APIs using Java and Spring to seamlessly integrate multiple systems with the Guidewire Claim Center application, enabling streamlined data flow and system interoperability.
 - Ensured exceptional code quality through comprehensive unit testing and strategic debugging, proactively identifying and resolving critical bugs to maintain optimal API performance.
 - Orchestrated cross-functional collaboration with development teams to guarantee flawless API integration and successful project delivery, and supported build and deployment pipelines for reliable application delivery.

Tools & Technologies: Java, Spring, REST, SOAP, Swagger, Jenkins, JBoss, Tomcat, Git, Bitbucket, JUnit, Mockito, Jira, Confluence

EDUCATION

University of Calicut
B.Tech, Electronics & Communication Engineering
CGPA: 7.33 / 10 · Kerala, India

Apr 2016

ADDITIONAL INFORMATION

Visa Status: Resident Visa, Abu Dhabi
Dubai driving license holder
Have self transportation