

MOHAMMED AASHIK

Senior Software Engineer

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Dubai, United Arab Emirates Visit Visa Sri Lanka



PROFESSIONAL SUMMARY

Software Engineer with 7 years building production backend systems and cloud-native platforms, currently based in Dubai. Specialised in TypeScript/NextJS microservices, event-driven architecture with Kafka and RabbitMQ, and identity systems built on Keycloak and OAuth 2.0/OIDC. Delivered enterprise platforms across railway ticketing, multi-tenant SaaS and content-driven systems for the UAE, UK and Sri Lankan clients. Comfortable owning a service end to end - schema design, API contracts, containerised deployment on Kubernetes, and observability - and equally productive in Next.js/React when full-stack ownership is required

KEY ACHIEVEMENTS

- ◆

Built Scalable Microservice Platforms
Designed and delivered cloud-native microservice architectures using NestJS, RabbitMQ, Docker, Kubernetes, and PostgreSQL for enterprise-scale applications.
- ◆

Improved System Performance
Optimized APIs, database queries, and backend services, reducing report generation time by up to 50% while improving application responsiveness.
- ◆

Strengthened Platform Security
Implemented enterprise authentication and authorization using Keycloak, JWT, OAuth2, and RBAC to secure multi-tenant SaaS platforms.
- ◆

Modernized DevOps & CI/CD
Implemented containerized deployments, CI/CD pipelines, Infrastructure as Code, and monitoring solutions using Docker, Kubernetes, Terraform, and GitHub Actions.

PROFESSIONAL EXPERIENCE

- 12/2025 - 07/2026

Dubai, UAE

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Senior Software Engineer (Contract)

Veuston International

 - Expanded user capacity by 100%, resulting in enhanced platform performance, by implementing tenant isolation and dynamic routing.
 - Designed a granular RBAC engine on a resource:action permission model, allowing administrators to compose custom roles without engineering involvement.
 - Implemented authentication and account security: JWT sessions with refresh-token rotation, Passport.js strategies, and multistep OTP verification via Resend.
 - Integrated OpenAI's API to power document generation, content summarization and in-app chat assistance, using structured JSON schemas and prompt engineering for deterministic outputs.
 - Successfully delivered a multi-tenant SaaS platform to production within the project timeline, enabling seamless onboarding of tenant organizations.
- 01/2024 - 10/2025

Colombo, Sri Lanka

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Software Engineer

Pelican Cube (Pvt) Ltd

Sri Lankan National Railway Ticketing and Train Management Platform

 - Reduced report generation time by 50% through query optimization, aggregation redesign, and caching, improving scheduling efficiency for operational teams.
 - Built and maintained NestJS microservices handling ticketing, scheduling and reporting, improving service modularity and release independence
 - Refactored the RabbitMQ message-driven architecture - introducing retries, dead-letter queues and idempotent consumers - measurably reducing message loss and failed transactions
 - Implemented Keycloak-based SSO and role-based access control across services, replacing fragmented per-service authentication
 - Developed Next.js/React interfaces for scheduling and reporting workflows used daily by operations teams
 - Authored architecture documentation and API specifications, and drove a systematic refactoring effort that cut technical debt across multiple services
- 10/2021 - 11/2023

Colombo, Sri Lanka

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Software Engineer

InventuriX Technologies

Enterprise full-stack delivery for international (UK) clients

 - Owned end-to-end architecture for enterprise-grade applications, from requirements through production deployment and handover
 - Architected REST APIs and microservices with security-first design and horizontal scalability as first-class constraints
 - Built advanced Next.js applications (SSR, SSG, API routes, dynamic routing) on a shared reusable component system, cutting delivery time on new client projects
 - Designed MongoDB schemas and CMS architectures for complex content-driven platforms; raised Core Web Vitals to consistent 90+ Lighthouse scores through caching, bundle splitting and image optimisation
 - Managed Dockerised production environments and CI/CD pipelines; mentored junior engineers and led architectural reviews

PROFESSIONAL EXPERIENCE

04/2019 - 10/2021

Colombo, Sri Lanka

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Associate Software Engineer

InventuriX Technologies

• Delivered full-stack applications for UK-based clients using Next.js, React, Node.js, Express, MongoDB and TypeScript

• Integrated Stripe subscriptions with webhook automation, enabling recurring revenue operations for client platforms

• Engineered analytics dashboards and reporting modules, and built secure token-based authentication and authorisation flows

• Contributed to Docker-based deployments and CI/CD pipelines. Progressed from internship to Associate Engineer within six months

EDUCATION

2024 - 2025

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B.Sc. (Hons) Computing Science - Software Engineering

Kingston University, United Kingdom

2019

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HND in Software Development

Buckinghamshire New University, United Kingdom

2020 - 2023

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Diploma in Information & Communication Technology

Winsys City Campus, Sri Lanka

TECHNICAL SKILLS

Backend

NestJS

Node.js

Express.js

FastAPI

Hono

REST

GraphQL

gRPC

WebSockets

OpenAPI/Swagger

Frontend

Next.js (SSR/SSG/ISR)

React

Redux Toolkit

Zustand

Tailwind CSS

TypeScript

Databases & Caching

PostgreSQL

MongoDB

Redis

ClickHouse

Prisma

TypeORM

Mongoose

Drizzle

Architecture

Microservices

Event-Driven Architecture

Domain-Driven Design

CQRS

Clean Architecture

SOLID

Messaging

Apache Kafka

RabbitMQ

BullMQ

Redis Pub/Sub

Dead-Letter Queues

Identity & Security

Keycloak

OAuth 2.0

OpenID Connect

JWT

Passport.js

RBAC

API security

Cloud & DevOps

AWS (EC2, RDS, S3, IAM)

GCP (GKE, Cloud SQL)

AZURE (VM, SQLDB, BLOB, AKS)

Docker

Kubernetes

Helm

Terraform

ArgoCD

GitHub Actions

Nginx

Kong

Observability

OpenTelemetry

Prometheus

Grafana

Loki

Tempo

Elasticsearch

structured logging

TECHNICAL SKILLS

Testing & Tooling

Jest	Vitest	Supertest	Playwright	Nx monorepo	Bun	pnpm	Git
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Data Engineering

Azure Databricks	PySpark	Apache Spark
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AI Engineering

OpenAI	Anthropic Claude & Google Gemini APIs	LangChain/LangGraph	RAG & vector databases
prompt engineering			

SELECTED PROJECTS

Smart Ticketing & Seat Reservation Platform

📅 2026

Architected an event-driven platform of 12 NestJS microservices in a Nx monorepo on the Bun runtime, with inter-service calls over gRPC/HTTP-2

- Engineered thread-safe, atomic seat holds using Redis Lua scripts and a background sweeper, eliminating double-booking under concurrent load
- Built the messaging backbone on Apache Kafka (Kraft) with schema-registry validation and a custom retry/DLQ consumer interceptor
- Secured the edge with Kong API Gateway and Keycloak OIDC using offline JWT validation (sub-millisecond local checks) plus a Lua-based virtual waiting room to absorb traffic surges
- Provisioned a private GKE cluster, Cloud SQL and Memorystore via modular Terraform; deployed through parameterized Helm charts with HPA, PDB and Argo Rollouts canary releases (10/50/100) managed by ArgoCD GitOps
- Instrumented all services with OpenTelemetry, routing traces, logs and metrics to Tempo, Loki, Prometheus and Grafana; streamed transaction events into ClickHouse for real-time occupancy and revenue analytics
- Enforced ticket integrity with HMAC-SHA256 signed QR codes, and integrated Pay Here checkout with signature verification and idempotent callbacks

Campus Express - Real-Time Logistics & Delivery Platform

📅 2024

Built a real-time delivery platform as NestJS microservices in a Nx monorepo, orchestrating order state transitions through a Kafka event-driven model

- Engineered automated rider dispatch using Redis Geospatial indexing to match each order with the nearest available courier
- Implemented live rider tracking over Socket.IO with Redis Pub/Sub for horizontal scale-out across instances
- Modelled restaurants, catalogs, orders, payments and delivery points in PostgreSQL with Prisma; configured Keycloak SSO with Student, Rider, Merchant and Admin roles
- Integrated wallet and card payments with webhook callbacks and idempotent ledger transactions; deployed to Kubernetes with HPA and automated builds via GitHub Actions

LANGUAGES

English Professional working proficiency

ADDITIONAL INFORMATION

🗂️ **Languages**
English (professional working proficiency)

📅 **Availability**
Available for Immediate Joining

📄 **Certificates**
UK degree certificates available for MOFA / UAE attestation. References on request