

**Mohammed Fahad**  
**Senior SDE - (Senior Software Development Engineer)**  
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## SUMMARY

**Dedicated and results-oriented Software Engineer with over 6+ years of experience in backend development**, specializing in system architecture, scalable solutions, and project management. Proficient in leading and executing complex projects with a focus on innovative use of technologies such as **NodeJS, TypeScript, and AWS**. Demonstrated success in improving systems through meticulous development and strategic enhancements, particularly in secure, high-demand environments. Actively seeking opportunities to leverage expertise in tech leadership and hands-on development to drive business efficiency and innovation.

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## PROFESSIONAL EXPERIENCE

### CodeVyasa (Client: QNu Labs)

**Senior Software Development Engineer | Bangalore, India | May 2024 - Present**

**Technology Stack:** NodeJS, TypeScript (NestJS), MongoDB, Kibana, Postgres, Docker, Redis, Kafka, Prisma, Elasticsearch, GitLab

- Led a **7-member team** to architect and build the backend for India's **first Quantum Key Distribution Network (QKDN)** for defense applications.
- Designed secure **multi-level access management (5 roles)**, node/link management, device configuration workflows, and **50+ event-handling** capabilities.
- Developed backend using **TypeScript (NestJS)**, **PostgreSQL (Prisma)**, **Redis**, **Elasticsearch/Kibana**, and **Kafka** for secure node communication.
- Delivered a fully **on-premise, intranet-only** deployment using **VMs** and **Docker**, meeting strict defense security requirements.
- Currently leading the development of a **highly available Kubernetes-based QKDN ecosystem** with automated failover, **HAProxy load balancing**, **Lonhorns storage**, **Flannel networking**, and **Prometheus/Grafana** monitoring.
- Building **MCARP**, a QKDN experiment platform enabling **custom algorithm execution**, experiment orchestration, and analytics across distributed **Bob/Alice nodes**.

### Kenko Health

**SDE 2 | Bangalore, India | January 2022 - August 2023**

**Technology Stack:** NodeJS, AWS (EC2, S3, ElasticCache), TypeScript (Ts.Ed and NestJS), MongoDB, Python (scripting), Prisma, Elasticsearch, CRM (Hubspot), GitHub, Kafka

- Spearheaded the migration from **monolithic to microservice** architecture, enhancing scalability, efficiency, agility, **fault isolation**, deployment frequency, and system availability.
- Designed and implemented HR portal microservices for **B2B clients**, processing over 10K records at a time with robust retries, **audit logs**, and fallbacks.

- Developed a versatile payment module incorporating multiple payment gateways such as **JusPay and Razorpay**, managing over 1k+ transactions daily with robust retries and audit logs.
- Facilitated over **5K+ API** calls between backend systems and CRM (Hubspot) for seamless data synchronization.

### **Intugine Technologies Pvt Ltd**

**Software Engineer | Bangalore, India | July 2019 - January 2022**

**Technology Stack:** NodeJS, AWS (EC2, S3, ElasticCache, MQ, Batch, Lambda, ECS, ECR, CodeCommit, CodePipeline, CodeBuild, CodeDeploy, Step Functions, SQS, SNS, CloudWatch), JavaScript (ExpressJS), TypeScript (Ts.Ed), MongoDB, Python (scripting)

- **Led the development of India's top Transportation Management System (TMS)** for parcel solutions, serving 75+ clients.
- Created a highly efficient shipment tracking engine from scratch, managing the **daily tracking of 100K+ shipments**.
- Reduced ticket **resolution time by 60%** and **decreased ticket volume by 80%**, through the development of a Control Tower.

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### **SKILLS**

**Languages:** TypeScript, JavaScript, Python

**Frameworks and Libraries:** NestJS, ExpressJS, Ts.Ed, WebSockets

**Databases:** MongoDB, PostgreSQL, Redis, Prisma

**Cloud Services:** AWS (EC2, S3, ElasticCache, Lambda, ECS, ECR, SQS, SNS, CloudWatch)

**DevOps and Tools:** Docker, GitLab, GitHub, Kafka, Kibana, ElasticSearch

**Payment Services:** Razorpay, JusPay

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### **EDUCATION**

**Birla Institute of Technology**

**MTech (Software Systems) Work Integrated Learning Programmes (WILP) | Bangalore, India | 2021-2023**

**Vemana Institute Of Technology**

**BE (Information Science and Engineering) | Bangalore, India | 2015-2019**

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### **CERTIFICATES AND COURSES**

- **MongoDB University:** MongoDB Node.js Developer Path, 2023
- **MongoDB University:** MongoDB Aggregation with Node.js, 2023
- **Udemy:** Fundamentals of Backend Engineering, 2023
- **Udemy:** NestJS Zero to Hero - Modern TypeScript Back-end Development, 2023