

NAVEENKUMAR KOPPALA *Senior Backend and Product Engineer*

✉ naveenkumarkoppala@gmail.com

☎ 9059933885

📍 Hyderabad, India 500085

🌐 [linkedin.com/in/naveenkumarkoppala/](https://www.linkedin.com/in/naveenkumarkoppala/)

🔗 <https://naveenkumar.vercel.app/>

SUMMARY

Senior Backend and Product Engineer with over 4.8 years of experience in designing and scaling secure backend systems for fintech, edtech, and enterprise platforms. Expertise in Python, FastAPI, microservices, and cloud-native architectures, including Kubernetes and DevOps automation. Demonstrated success in implementing robust APIs, optimizing performance, and developing production-grade CI/CD systems. Practiced in Test-Driven Development (TDD) and AWS event-driven architectures including SQS/SNS, EventBridge, and API Gateway.

EXPERIENCE

02/2025 – Current
Hyderabad, India

Transnational Software Services Pvt. Ltd, Product Engineer

- **Architected and led** the development of scalable backend services using Python and FastAPI, strictly adhering to clean architecture principles for long-term maintainability.
- **Owned authentication and authorization systems**, successfully integrating AWS Cognito, JWT, and robust role-based access control (RBAC) across multiple microservices.
- **Designed event-driven serverless workflows** utilizing AWS Lambda, significantly improving system decoupling, asynchronous processing, and overall scalability.
- **Provisioned and managed cloud infrastructure** as code (IaC) using **Terraform**, standardizing environments and ensuring rapid, repeatable, and scalable deployments.
- **Standardized CI/CD pipelines** using GitLab CI, automating test and deployment processes to reduce release friction and improve deployment reliability.
- **Optimized API performance** by implementing advanced Redis caching and session management strategies, drastically reducing response times.
- **Engineered scalable data retrieval** by implementing an OpenSearch indexing strategy, accelerating read operations and reducing query latency by [X]%.
- **Containerized microservices** using Docker for deployment in Kubernetes-based cloud-native environments, ensuring high availability and fault tolerance.
- **Proactively monitored system health** and reliability using observability tooling, rapidly diagnosing and resolving production performance and security bottlenecks.
- Implemented event-driven messaging using AWS SQS/SNS and EventBridge for asynchronous, decoupled microservice communication.
- Applied Test-Driven Development (TDD) practices using Pytest, maintaining high test coverage across all backend modules.

10/2022 – 01/2025
Hyderabad, India

Anukta Infotech Pvt. Ltd, Full Stack Developer II

- Implemented real-time MySQL to BigQuery data replication via Google Cloud Datastream, ensuring minimal latency and schema consistency.
- Configured MySQL binary logging for efficient data transfer; built automated monitoring for downtime detection and replication failure alerts.
- Designed backend APIs and microservices, integrating Kafka for event-driven data pipelines.
- Developed a React-based web application from the ground up, utilizing Redux for scalable state management.
- Managed Kubernetes clusters on DigitalOcean, deploying services using kubectl and Docker Registry.

- Automated CI/CD pipelines with Jenkins, incorporating Horizontal Pod Autoscaler for dynamic scaling.
- Secured ingress communications using NGINX Ingress Controller and implemented TLS encryption with SSL certificate integration.
- Established testing frameworks with Mocha and Jest, improving code coverage and stability.

02/2022 – 10/2022
Hyderabad, India

Respo Financial Capital, Software Engineer

- Developed backend microservices for fintech loan platform ZYPE using Node.js and Express.js.
- Implemented essential workflows, such as KYC, credit underwriting, and cash disbursement with Yes Bank.
- Optimized MySQL schemas, stored procedures, and scheduled jobs for enhanced performance.
- Achieved real-time data streaming from third-party LMS systems via Kafka on Confluent Cloud.
- Documented APIs utilizing Swagger and facilitated access through Kong API Gateway.
- Built CI/CD pipelines employing GitHub Actions, AWS ECR, and Kubernetes.
- Integrated AWS SQS/SNS for reliable async messaging between payment processing services.

07/2021 – 02/2022
Hyderabad, India

C360 Software, Full Stack Developer

- Developed mobile messaging system for Merck & Co utilizing Twilio, AWS Lambda, and DynamoDB.
- Created authentication and customer verification modules for Karnataka Government Land Registration Portal.
- Designed backend architecture for EdTech Learning Management System using Node.js and MongoDB.

EDUCATION AND TRAINING

03/2018
Kurnool

Associate of Arts: Accounting & Finance, Rayalaseema University

SKILLS

Backend & APIs

Python, FastAPI, Node.js, Express, RESTful APIs, Microservices Architecture, Asynchronous Programming

Search & Streaming

OpenSearch, Apache Kafka, Confluent Cloud

Monitoring & Observability

Datadog, OpenSearch Dashboards, Prometheus / Grafana, CloudWatch

Cloud & DevOps

AWS (Lambda, SQS/SNS, EventBridge, API Gateway, DynamoDB, S3, ECR/ECS, Cognito, EC2, CloudWatch, DMS), Kubernetes (K8s), Helm, Docker, Terraform, GitLab CI/CD, Jenkins, ArgoCD, Ansible

Security

AWS Cognito, JWT, OAuth2, Role-Based Access Control (RBAC), API Security, TLS/SSL

Databases & Caching

MySQL, MongoDB, DynamoDB, PostgreSQL, Redis, BigQuery

Testing & Performance

TDD, Pytest, Jest, Mocha, Cypress, K6 (Load & Stress Testing)