NIKHIL HEGDE *Software Engineer*

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PROFILE SUMMARY

Backend-dominant full-stack engineer with ~2 years of experience in designing and maintaining production systems. Primary interests include backend architecture, database engineering, and performance optimization, with working knowledge across frontend, AI/ML systems, and DevOps. Enjoys turning complex requirements into clean, reliable services.

WORK EXPERIENCE

08/2024 – Present
Hyderabad

Stryv.ai, *Software Engineer*

Technologies: Python, FastAPI, PostgreSQL, Redis, Kafka, WebSockets, Azure Functions, SQLAlchemy, LangGraph

- Recognized with the **Key Contributor Award** for impactful contributions to backend systems.
- Designed and implemented a **supply-chain scoring engine** to compute order-level business metrics from complex business rules.
- Built an **agent-based AI chatbot** for a hospitality platform to automate customer support workflows.
- Built a real-time **user-facing event streaming system** using Kafka and WebSockets to surface live process updates in the UI.
- Reduced **database load and improved API latency** through Redis caching, async design, and PostgreSQL query optimization.
- Migrated legacy .NET modules into FastAPI-based **microservices**, improving maintainability and system performance.

01/2024 – 07/2024
Manipal

Ganglia Technologies Pvt Ltd, *Software Engineer Intern*

Technologies: Python, Node.js, Express, MongoDB, React, LLMs, RAG

- Built a speech-to-text system for a healthcare application to **auto-populate clinical forms from voice input.**
- Designed and implemented backend **APIs for a livestock marketplace platform,** supporting product listings, search, filtering, and transaction workflows.
- Contributed to **LLM-based retrieval workflows** using RAG for structured data access.

SKILLS

Programming Languages
Python, JavaScript, C++, Java, Go

AI/ML
Machine Learning, Lang Chain, Lang Graph, Large Language Models (LLMs), Retrieval-Augmented Generation (RAG)

Backend Technologies
FastAPI, Node.js, Express.js, WebSockets, Kafka, Redis, Microservices

DevOps & Cloud
Git, Docker, AWS, Google Cloud Platform, Azure

Databases
PostgreSQL, MongoDB, SQL, Firebase, Vector Databases

Frontend Technologies
React, EJS, HTML, CSS

TECHNICAL TALKS

08/2025 **MVCC in PostgreSQL: The Hidden Engine Behind Your Transactions,**
Speaker at Hyderabad Postgres Days 2025 (August) ⧉
- **Delivered a deep technical talk on PostgreSQL internals, covering MVCC, tuple visibility, transaction isolation, indexing, storage layout, and VACUUM mechanics.**

PROJECTS

BookARide - Ride Booking Platform (Uber-like system),
Tech: React, Node.js, MongoDB, WebSockets, Razorpay, AWS, NGINX ⧉
- **Built a full-stack ride-hailing platform** with real-time driver tracking, WebSocket-based ride updates, and end-to-end ride lifecycle management (booking, cancellation, reassignment).
- **Implemented secure authentication & payments**, using JWT with role-based access and token blacklisting, and Razorpay integration with order and signature verification.
- **Designed scalable backend infrastructure** with MongoDB geospatial matching and heatmaps, deployed on AWS with NGINX reverse proxying.

Inspire - AI-Powered Social Platform, *Tech: Node.js, FastAPI, MongoDB, TensorFlow, Docker, GCP, Python* ⧉
- **Developed a production-ready social platform** with ML-powered real-time toxicity filtering, FastAPI model inference, scalable backend services, image optimization via Sharp, and Docker-based deployment on GCP.

LiveTrack - Real-Time Location Tracking System,
Tech: Node.js, WebSockets, Docker, Google Cloud Platform, Google Analytics ⧉
- **Real-time location tracker with live updates,** similar to Swiggy, Zomato, or WhatsApp Live Location. Integrated with Google Analytics for tracking user behaviour and performance insights.

CERTIFICATIONS

NodeJS Internals and Architecture ⧉
By **Hussein Nasser**

AWS Cloud Technical Essentials ⧉
Issued by **Amazon Web Services (AWS)**

Complete Intro to React by Brian Holt
Issued by **Frontend Masters**

Machine Learning ⧉
Issued by Internshala Trainings

EDUCATION

2022 – 2024 **Master of Computer Applications (MCA),** *MIT, Manipal*
CGPA - 9.06

2019 – 2022 **Bachelor of Science (Physics, Maths, Comp. Science),** *JSS, Dharwad*
Percentage - 84

RESEARCH PUBLICATIONS

Analyzing AI Regulation Through Literature and Current Trends ⧉
- Published in *Journal of Open Innovation* **(Scopus Q1, Top 1%)**

Hospital-Acquired Infection Management with AI ⧉
- Presented at ***International Conference*** on iDEAAS 2024

Diabetic Retinopathy Classification via Activation Function Optimization ⧉
- Presented at ***Springer Nature SIGMAA 2023***