

Nagbhushan Pai

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Experience

SDE (Backend) Intern, Data Axle, Pune

Jan 2026 – June 2026

- Designed and implemented a scalable DirectMail microservice using **Django and GraphQL (Graphene)**, reducing dependency on legacy monolithic components and improving service modularity.
- Built flexible **GraphQL APIs** supporting integration with **3 enterprise client applications**, reducing front-end data-fetching overhead by **30%**.
- Implemented **Temporal workflow orchestration** for reliable and fault-tolerant business processes, improving workflow execution success rates to **99%+**.
- Deployed cloud-native services on **AWS**, integrating monitoring and logging that reduced incident diagnosis time by approximately **40%**.
- Performed code reviews, debugging, and automated testing, contributing to **94% test coverage** and reducing production defects by approximately **25%**.

Software Engineer Intern, ONJI Softwares Pvt Ltd (Demo)

Jun 2025 – Aug 2025

- Developed front-end components for a cross-platform mobile application using **React Native and Expo**.
- Converted **Figma UI designs into pixel-accurate features**, improving product consistency.
- Implemented authentication, navigation, and state management improving load performance by **20%**.
- Collaborated in **Agile development workflows** using Git version control and sprint-based delivery.

RAG-Based Multi-LLM Evaluation System for Indian Scriptures at IIT BHU (GitHub)

2025

- Developed a **Retrieval-Augmented Generation (RAG)** framework using **Sentence Transformers and FAISS** to enable semantic question answering over Indian scripture datasets.
- Benchmarked **Gemma, Qwen, Llama, and StableLM** on **700+ Q&A pairs** using BLEU, ROUGE-L, and BERTScore, creating an end-to-end evaluation pipeline for LLM performance analysis.

Projects

Distributed Rate Limiter (Redis + Token Bucket)

[GitHub](#)

- Designed and implemented a **distributed rate limiter** using **Redis and Lua scripts** supporting 10K+ requests/sec.
- Implemented **token bucket and sliding window algorithms** to handle burst traffic and ensure fairness.
- Optimized latency to **<5ms per request** using atomic Redis operations.

Mini Kafka - Event Streaming System

[GitHub](#)

- Developed a **event streaming platform** with producer-consumer architecture and topic partitioning.
- Implemented **log-based storage with offset tracking** ensuring fault tolerance and replay capability.
- Designed concurrent consumers using **multi-threading** achieving high throughput.
- Simulated real-world workloads with **benchmarking scripts** to test scalability.

Audio-Video Deepfake Detection System

[GitHub](#)

- Built hybrid **CNN + Vision Transformer model** achieving **92% accuracy** on FaceForensics++ dataset.
- Developed an end-to-end ML pipeline including preprocessing, model training, and **Flask-based API deployment**.
- Implemented real-time video processing pipeline for automated deepfake detection.

Technical Skills

Languages: Python, C/C++, SQL, C#/.NET

Frameworks & Tools: Django, GraphQL (Graphene), Temporal, Git, PostgreSQL

Cloud & DevOps: AWS (S3,CloudWatch,SQS,SNS), Docker, CI/CD concepts, Linux, REST APIs

AI Tools: Prompt Engineering, LLM APIs, AI-assisted coding tools (GitHub Copilot, Cursor)

Concepts: Data Structures, SDLC, Microservices Architecture, System Design, Machine Learning, Networking

Education

Manipal Institute of Technology, Manipal

B.Tech in Cyber Physical Systems, Minor in Data Science | CGPA: 7.9

2022 – 2026

Army Public School, Pune | CBSE | 12th: 91.83%

May 2022

Extra-Curricular

Smart India Hackathon 2024 Finalist (IIT Guwahati)

Aug 2024

Electronics Team, Dronaid

Dec 2022 – Feb 2023

NCC Sergeant (C-Certificate, Alpha Grade)

Sep 2022 – Feb 2025