Reet Nandy

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Education

New York University – Masters in Computer Science (MS)   May 2025
- *Relevant Coursework*: Data Structures and Algorithms, Cloud Computing, Machine Learning, Big Data Analytics, Database Systems, Software Engineering, Object-oriented Design, Probability and Statistics
- *Graduate Teaching Assistant*: CS GY 6233 - Operating System, CSCI UA 0310 - Algorithms

Manipal University Jaipur – Bachelors in Computer Science (B. Tech)   May 2023

Skills

Frontend + Backend: Python (FastAPI, Django), Next.js (TypeScript), Tailwind CSS, Node.js (Express.js), Java (Spring Boot)
AI / LLM: Transformer (GPT, BERT, LLaMA), Graph + RAG, Fine-tuning, Embeddings, Quantization, Multi-Agent
Cloud + DevOps: AWS (EC2, Lambda, S3, SageMaker, Prometheus), GCP, Kubernetes, Docker, CI/CD, ELK Stack
Data + Pipeline: SQL (PostgreSQL), NoSQL (MongoDB), Vector DBs, Redis, Kafka, Airflow, ETL / ELT, REST, gRPC

Experience

Mobility Intelligence, New York City, USA   June 2024 – December 2024
Backend Development Intern (ML)   *React,* FastAPI*, TensorFlow, PostgreSQL, Airflow*
- Engineered regression + time series model with Kalman filtering, reducing forecast errors to 5% for 90-day horizons.
- Constructed ETL pipelines using Apache Airflow processing 15M+ daily records saving 3 man hours per dataset.
- Delivered FastAPI-ReactJS app enabling real-time ML model integration, delivering predictions with sub-1s latency.

Defence Research & Development Organisation, India   January 2023 – June 2023
Software Engineering Intern (R&D)   *Python, PyQT, Redis, PostgreSQL, Docker, SciPy, Threading*
- Designed PyQT desktop app with multi-threaded LiDAR data processing for real-time 3D mapping (97% accuracy).
- Developed streaming ETL pipeline with zero-copy buffers and SciPy transforms, reducing calibration errors by 70%.
- Built Redis-PostgreSQL hybrid retrieval using geospatial indexing to reduce GPS API latency from 1sec to 150ms.

Solar Industries India Ltd, India   April 2022 – December 2022
Software Engineering Intern   *Python, AWS, Django, Kafka, Redis, SQL, Docker*
- Directed automation initiative with 5 interns for 25+ plants, deploying 5 Django projects totaling 75K+ lines of code.
- Pioneered Kafka pipeline for high-throughput data processing, achieving 2.5M rows/sec with 100K+ daily requests.
- Optimized workflows across 5 cross-functional teams by implementing distributed caching, cutting API latency by 20%

Projects

[AI Agent] **GraphRAG - LLM Document Compliance** ([Github](#))   *Next.js, FastAPI, GraphRAG, LLM, FAISS, Neo4J, SQL*
- Implemented a GraphRAG and PDF parser from scratch for unstructured PDFs using PDFMiner & Tesseract (OCR).
- Executed semantic chunking + NLP NER + BART-CNN summarization, achieving 70% relation extraction accuracy.
- Synthesized hybrid retrieval (Vector + Graph + metadata) boosting compliance accuracy to 90%.
- Launched Next.js SAAS with real-time document edit, approval and audit reports via WebSocket and Anthropic API.

[AWS / Fullstack] **AI-Fitness Analytics Dashboard** ([Github](#))   *AWS, ReactJS, Django, PostgreSQL, DynamoDB, KNN*
- Deployed Django API on Elastic Beanstalk with Google Fit integration, configured auto-scaling groups + health probes.
- Orchestrated pipelines with Lambda-SageMaker, deploying KNN models for recommendations at 92% accuracy.
- Coordinated event-driven metrics processing via SNS/SQS, achieving 800ms p95 latency for real-time health data.

[LLM / RAG] **Multi-Platform LLM Task Orchestrator** ([Github](#))   *Flask, LLM, RAG, NoSQL, Vector DB, GOOGLE API*
- Created Flask API with Gmail/Slack/Trello via OAuth2, automating task extraction with OpenAI priority classification.
- Configured MongoDB RAG system with vector indexing for context memory management via chat history tracking.
- Automated cross-platform workflow triggers using LLM decision trees, reducing manual task management by 60%

[AWS / Infra] **Cloud Monitoring and Alerting System** ([Github](#))   *AWS, Docker, Kubernetes, Prometheus*
- Released Flask-MongoDB on AWS EKS with managed nodes and HPA, enabling rolling updates and health probes.
- Established Prometheus with SNS-Lambda alerts for Slack, configuring multi-cluster monitoring rules.