

SITARAM PRAVASH CHANDRA NANDI

Software Engineer | Python Backend & AI Engineering

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PROFESSIONAL SUMMARY

Software Engineer with 3+ years of experience designing and delivering scalable, production-grade backend systems in Python using Django, FastAPI, and REST APIs. Delivers features across the full development lifecycle, collaborating across product, QA, and client teams and mentoring junior developers. Specializes in Generative AI and Agentic AI, building RAG systems, LLM integrations, and vector-based semantic search, with a consistent focus on performance, reliability, and measurable impact.

TECHNICAL SKILLS

Languages & Frameworks: Python, Django, Django REST Framework (DRF), FastAPI, HTMX

AI & Machine Learning: Generative AI, LLMs, RAG, LangChain, LangGraph, Embeddings, Semantic Search, AI Guardrails

Databases: MySQL, PostgreSQL, Azure SQL, Vector Databases (FAISS, Chroma, Qdrant)

Cloud & DevOps: AWS (S3, RDS, IAM, EC2), Docker, Azure Data Factory (ADF), Azure Data Lake Storage (ADLS)

Backend & Tools: REST APIs, JWT, OAuth, AsyncIO, Redis, Celery, Cron Jobs, Git, GitHub

WORK EXPERIENCE

Utkal Labs | Software Engineer

Feb 2025 – Present

HRMS Product

Technologies: Python, Django, Django REST Framework, HTMX, PostgreSQL

- Led development of a Project Management module with CRUD operations, role-based access control (RBAC), and search, collaborating with product and QA teams to integrate it into the HRMS platform.
- Deployed and managed the staging environment on Azure VM, including configuration, monitoring, and security setup.
- Automated recurring backend tasks using scheduled cron jobs, reducing manual operational effort by approximately 40%.
- Mentored junior developers through regular code reviews and technical guidance, improving team code quality and delivery consistency.

RAG-Based Enterprise Knowledge Retrieval System

Technologies: Python, FastAPI, RAG, LLMs, FAISS, Chroma, Qdrant, Embeddings, Semantic Search

- Engineered a Retrieval-Augmented Generation (RAG) platform enabling intelligent question-answering across enterprise knowledge repositories, reducing information lookup time by approximately 50%.
- Designed scalable document ingestion, embedding generation, indexing, and retrieval pipelines using vector databases.
- Developed FastAPI-based backend services for document processing, semantic search, and AI-powered query execution.
- Optimized retrieval quality, embedding strategies, and context augmentation, improving response accuracy by approximately 30%.
- Delivered modular, production-ready APIs with comprehensive testing, monitoring, and documentation.

Shree Gajanan Enterprises LLP | Software Developer

Apr 2023 – Jan 2025

AI-Powered API Platform

Technologies: Python, FastAPI, JWT, OAuth, AsyncIO, REST APIs

- Architected secure FastAPI-based backend services supporting AI model interaction and enterprise integrations.
- Applied JWT and OAuth authentication mechanisms to secure API access and user authorization.
- Leveraged AsyncIO to build high-performance, asynchronous APIs handling 500+ concurrent AI requests.
- Established modular service architectures with robust testing, logging, and API documentation.
- Improved backend performance and scalability, reducing average API response time by approximately 35%.

SEO Optimization System

Technologies: Python, FastAPI, PostgreSQL, Docker

- Created a Broken Link Detection module using Python and FastAPI, improving website SEO health across 5,000+ scanned pages.
- Detected HTTP errors (404, 500) and dynamically replaced invalid URLs, restoring integrity for approximately 95% of broken links.
- Integrated advanced filters (status code, domain, page count), reducing manual link-review effort by approximately 60%.
- Containerized the service using Docker for consistent deployment across environments.

EDUCATION

Bachelor of Science in Physics | Utkal University

2019 – 2022