

Ganesh Sharma

Software Engineer (Python / FastAPI / ReactJS / PostgreSQL)

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GitHub | Portfolio | LinkedIn

PROFILE SUMMARY

Software Engineer with hands-on experience building production-oriented, end-to-end web applications from back-end & frontend to DevOps & deployment. My experience include building multi-user academic & student management tool, scalable blog platform. Strong problem-solver who takes ownership, builds with security, reliability, and maintainability in mind, and focuses on delivering practical solutions to real-world requirements.

PROJECTS

CampusSphere: Multi-user Student & Academic Management System | *FastAPI, ReactJS, PostgreSQL, SQLAlchemy, Pydantic, Alembic, Pytest, Docker*

- Built a centralized academic management platform to handle students, teachers, departments, attendance, fees, and administrative operations while preventing unauthorized users from accessing or modifying sensitive institutional data.
- Designed and developed the system end-to-end with FastAPI, ReactJS, PostgreSQL, and SQLAlchemy, implementing JWT-based authentication, protected endpoints, role-based access control (RBAC), strict Pydantic request/response validation, relational constraints, transaction-aware database operations, optimized ORM queries to avoid $N + 1$ patterns, reliable Alembic migrations, comprehensive Pytest coverage, and Docker-based containerization.
- Delivered a production-oriented, multi-user system with clearly separated responsibilities like administrators manage institutional data and staff, teachers manage attendance and academic operations, and clerks/accountants manage fees—providing a secure and maintainable foundation for real-world academic workflows.

Medium-like Blog Writing Platform | *FastAPI, ReactJS, PostgreSQL, SQLAlchemy, Pydantic, Alembic, Tailwind CSS*

- Built a Medium-inspired publishing platform that enables writers to create and manage long-form content while allowing readers to discover and read published blogs through a centralized web application.
- Developed the platform end-to-end with FastAPI, ReactJS, PostgreSQL, and SQLAlchemy, implementing authenticated writer workflows for creating, editing, and managing blogs, protected API endpoints, Pydantic request/response validation, relational database models, and Alembic migrations for reliable schema evolution.
- Delivered a full-stack content platform with secure user access, writer-owned content management, persistent PostgreSQL storage, and a responsive React/Tailwind interface, providing a complete publishing workflow from content creation to reader consumption.

TECHNICAL SKILLS

Languages: Python, JavaScript, SQL, HTML, CSS

Backend Development: FastAPI, Pydantic, SQLAlchemy, Alembic, REST APIs, Database Design

Frontend Development: ReactJS, Tailwind CSS, Responsive Design, Figma

Databases: PostgreSQL, SQLite, Redis

DevOps, Cloud, & Testing: Git/GitHub, Docker, Linux Commands, Nginx, AWS (EC2, S3, RDS, S3), Pytest

AI/ML: LLM APIs, LangChain

RESEARCH & PUBLICATIONS

MITRA AI Chatbot Assistant: Using 8-Bit Quantized LLMs on Consumer-Grade GPUs

Published in *International Journal for Research in Applied Science and Engineering Technology (IJRASET)*

Volume 14, Issue III, pp. 5059–5065, ISSN: 2321-9653.

EDUCATION

University of Mumbai

B.E. in Computer Science & Engineering (AI & ML)

Mumbai, India

2022–2026