

RITIK KUMAR GUPTA

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ABOUT ME

Machine Learning Engineer skilled in Deep Learning, GenAI, and real-world AI product development. I build scalable AI systems using PyTorch, TensorFlow, FastAPI, LangChain/LangGraph, and modern deployment tools. Efficient, fast-learning, and impact-driven passionate about creating AI that solves meaningful real-world problems.

EDUCATION

Galgotias College Of Engineering And Technology

November 2022 - August 2026

B.Tech - Artificial Intelligence And Machine Learning

Greater Noida, Uttar Pradesh

TECHNICAL SKILLS

AIML: Supervised, Unsupervised, CNN, RNN, Transformers, Model Training and Evaluation, NLP.

GenAI and LLM Ecosystem: OpenAI APIs, LangChain, LangGraph, Agentic AI Workflows, RAG, MCP Servers, Vector Databases, LLM Fine-tuning.

Programming Languages: Python, C, C++, Java, JavaScript.

Frameworks and Libraries: PyTorch, TensorFlow, Scikit-Learn, FastAPI, Pandas, NumPy, Matplotlib, Seaborn, React.js, Streamlit

DevOps Cloud: Docker, GitHub Actions, Hugging Face Hub, Weabur, Netlify, Render

Databases: PostgreSQL, MySQL, SQLite, Pinecone, ChromaDB

Tools and Platforms: VS Code, GitHub, Jupyter Notebook, Hugging Face, Model Deployment and MLOps

EXPERIENCE

Independent Machine Learning Developer - Remote

September 2023 - Present

- Engineered and deployed production-grade AI services using FastAPI and Docker, enabling scalable and low-latency inference.
- Developed Generative AI and Agentic AI pipelines with LangChain, LangGraph, and OpenAI models to automate text generation, analysis, and reasoning tasks.
- Built LLM-powered autonomous agents for advanced use cases such as document intelligence, risk analysis, and personalized recommendations.
- Developed an LLM-powered diagnostic assistant combining GPT-4o-mini, LangChain, and vector retrieval to deliver accurate, explainable, and actionable medical insights from unstructured PDFs.

PROJECTS

MediSure AI | [🔗](#) | FastAPI, Python, LangChain, OpenAI GPT-4o-mini, FAISS, React, PyPDF2, Render

- Designed a hospital-grade AI platform that reads medical reports like a clinician converting unstructured PDFs into clean, decision-ready health insights within seconds.
- Built a seamless medical experience where patients and doctors can visualize risks, chat with AI for clarifications, and download professional SOAP-style reports with one click.)
- Combined AI reasoning, risk forecasting, visual storytelling, and medical reporting into a single platform — turning complex medical data into clarity, confidence, and action.

Nexanalyze AI - Transform Data Into Insights | [🔗](#) | Python, FastAPI, LangChain, Scikit-Learn, Pytorch

- Built an end-to-end AI-powered multi-agent system using FastAPI, LangChain, and GPT models to automate research, data analytics, sentiment prediction, and intelligent insights generation.
- Engineered advanced document and data analysis pipelines with statistical analysis, anomaly detection, correlation mapping, and time-series forecasting.
- Developed scalable ML modules including custom scikit-learn sentiment models, trend forecasting models, and automated visualization tools for generating charts, matrices, and professional reports.

Edublink: Smart Tools for Smart Teaching | [🔗](#) | FastAPI, HTML, CSS, JavaScript, Pydantic, OpenAI-APIKey

- Developed EduBlink, a production-ready AI-powered platform that generates high-quality educational content (MCQs, worksheets, lesson plans, PPTs, essays and more) within seconds using OpenAI GPT-4o.
- Engineered a FastAPI-based backend with secure server-side API key management, rate limiting, input validation, and error handling, ensuring reliability and safe deployment.
- Built a responsive single-page frontend using HTML, CSS, and JavaScript, featuring light/dark themes, animated UI, and real-time feedback to enhance user experience.
- Enabled professional educator workflows through features like proof-reading, text summarization, content rewriting, report card comments, essay grading, and printable results export.

CERTIFICATIONS

- AI and ML Bootcamp - Udemy [View](#)
- CampusX - Python, Machine Learning, Deep Learning, FastAPI, Pydantic, GenAI , Agentic AI, MCP Servers