

Lakshya Singh

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Professional Summary

AI/ML Engineer specializing in end-to-end AI deployment, MLOps, and cutting-edge research implementation. Experienced in deep learning, NLP, and computer vision, with a proven track record of building scalable AI solutions.

Key Skills

- **Programming Languages:** Python, Java, C++ , Dart, SQL
- **Frameworks/Libraries:** PyTorch, TensorFlow, Scikit-learn, Keras, Hugging Face Transformers, LangChain, Llama Index, Spring Boot, Flutter, NextJs, Prometheus, Grafana, Flask, REST APIs
- **MLOps/DevOps Tools:** Docker, Kubernetes, GCP, Azure, CI/CD, Git

Experience

AI Engineering Intern, Epitome Consulting

Feb 2025 - April 2025

- Developing LLM-powered tools to assist developers in code generation, debugging and documentation.
- Researching and prototyping AI-driven solutions for algorithmic trading.
- Collaborating with teams to create PoCs that integrate AI into real-world applications.

Projects

Financial Fraud Detection with GNNs

github.com/Financial-Fraud-Detection

- Developed a financial fraud detection system using **Graph Neural Networks (GNNs)**, achieving a 8% increase in fraud detection precision compared to baseline models.
- Implemented **spectral subgraph sampling** and **task-specific weight sharing** to improve the F1 score by another 32% and the AP score by 17%.
- The solution was deployed as a containerized API for real-world usability.

Agentic RAG for Legal Research - Smart India Hackathon | 6th rank

github.com/DHARA

- Designed an intelligent Retrieval-Augmented Generation (RAG) pipeline with query routing and hybrid retrieval (semantic + keyword) using Llama Index.
- Fine-tuned a **ModernBERT** model for document re-ranking, improving retrieval relevance significantly.
- Built and deployed a production-ready system with **Docker**, **Spring Boot** backend, and monitoring with **Prometheus** and **Grafana**.

Financial Aspect Based Sentiment Analysis

github.com/FABSA

- Fine-tuned **DeBERTa** for real-time sentiment analysis of financial news, achieving state-of-the-art 93% accuracy.
- Built a **Spring Boot** backend with secure APIs, **JWT authentication**, and caching with **Redis**.
- Deployed through a Docker container on **Azure**.

SAR Image Coloring

github.com/SAR-Colorization

- Implemented a **CNN**-based model to colorize Synthetic Aperture Radar (SAR) images.
- Developed this project as a proof-of-concept to showcase applications of deep learning in remote sensing.

Education

Bennett University | B.Tech in Computer Science | CGPA: 9.20/10.0

- **Certifications:** Machine Learning Specialization(Stanford, Deeplearning.AI), Deep Learning Specialization (Deeplearning.AI), ML in Production (DeepLearning.AI)