Lakshya Singh

AI/ML Engineer

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Professional Summary

AI/ML Engineer with expertise in deploying end-to-end AI solutions, MLOps, and state-of-the-art research implementation. Skilled in deep learning, artificial neural networks, natural language processing, and computer vision, with a proven track record of impactful projects. Passionate about building intelligent, real-world solutions.

Key Skills

- **Programming Languages:** Python, Java, C++, Dart, SQL
- **Frameworks/Libraries:** PyTorch, TensorFlow, Scikit-learn, Keras, Hugging Face Transformers, LangChain, Llama Index
- **MLOps/DevOps Tools:** Docker, Kubernetes, GCP, Azure, CI/CD, Git
- **AI/ML Domains:** Deep Learning, Natural Language Processing, Computer Vision, Reinforcement Learning
- **Other Tools & Skills:** Flask, Spring Boot, Flutter, NextJs, Prometheus, Grafana, REST APIs, Agile Methodologies

Education

Bennett University, Bachelor of Technology in Computer Science

- GPA: 9.10/10.0
- **Certifications:** Machine Learning Specialization(Stanford, Deeplearning.AI), Deep Learning Specialization (Deeplearning.AI), ML in Production (DeepLearning.AI)

Relevant Experience

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 F1 score by another 32% and AP score by 17%.
- Containerized the solution, deployed as API.

Agentic RAG for Legal Research - Smart India Hackathon | 6th Rank   github.com/DHARA

- Led a team of 6 to build an AI-powered legal research agent; core contributor to the AI pipeline.
- Designed an intelligent Retrieval-Augmented Generation (RAG) pipeline with query routing and hybrid retrieval (semantic + keyword) uisng Llama Index.
- Fine-tuned a Modern BERT 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 for scalable deployment.
- Deployed through a Docker container on GCP.

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.