Jivan Patil

Data Science, Gen AI & Machine Learning Professional

Results-driven Data Scientist specializing in **Generative AI, Machine Learning, and NLP**. Proficient in developing production-ready GenAI applications using LangChain, Hugging Face, and vector databases. Adept at statistical modeling, data visualization, and building LLM-based solutions for real-world business problems. Proven ability to collaborate across teams and deliver data-driven insights in fast-paced environments.

Contact

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Nashik, Maharashtra (India)

Skills

Programming & Libraries: **Python** (Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, Keras, TensorFlow), MySQL

Generative AI & LLMs: LangChain, LangGraph, OpenAI API, Hugging Face Transformers, Vector Databases, Prompt Engineering, RAG (Retrieval Augmented Generation), Large Language Models (LLM)

Machine Learning & Deep Learning: Random Forest, SVM, K-Nearest Neighbors, Gradient Boosting, XGBoost, Artificial Neural Networks (ANN), Convolutional Neural Networks (CNN), Natural Language Processing (NLP)

Data Science & Analysis: Statistical Analysis, Data Visualization (Power BI, Matplotlib, Seaborn), Data Cleaning, Feature Engineering

MLOps & Deployment: Git, GitHub, Streamlit, FastAPI, Docker, Microsoft Azure, AWS (S3, Bedrock, Lambda, API Gateway)

Projects

<u>Token Attribution Analysis in Al-Generated Text (R&D Project)</u>

- Quantified the contribution of each token in language model outputs using Shapley values and log probabilities.
- Developed methods to enhance interpretability and evaluation of LLM responses at the token level.

Agentic Q&A System for Analyzing Clinical Trial Data

- Developed an end-to-end LangChain RAG pipeline enable contextual retrieval
- Integrated agentic architecture with dual tools for natural language Q&A and structured DataFrame analytics.

LLM-based Case Structuring and Seriousness Classification

- Developed an Al-powered pipeline using LLMs to extract structured data from unstructured drug safety narratives.
- Automated seriousness classification and exported results to Excel, reducing manual effort by 70%.

<u>Serverless Blog Generator using Amazon Bedrock & AWS</u> <u>Lambda</u>

- Built a serverless blog generator using AWS Lambda, API Gateway, S3
 & Bedrock (LLaMA 3).
- Integrated LLM API for real-time GenAl content generation and cloud storage.

Experience

Syneos Health

Safety & PV Specialist I (Oct 2022 – Sep 2023)

- Developed parallel processing chunk framework for scalable document ingestion and multi-threaded search
 across distributed nodes.
- Implemented **custom retrieval augmentation (RAG)** with fine-grained chunking and semantic filtering to improve generation accuracy by 30%.
- Authored internal prompt optimization and performance benchmarking suite to evaluate multi-model response consistency.

IQVIA

Operations Specialist I (June 2021 – Oct 2021)

- Built classification models for identifying patterns in adverse events that led to a 15% reduction in duplicate case reporting.
- Supported triage and data entry processes by developing automated workflows, reducing manual errors by 25%.

Tata Consultancy Services

Senior Process Associate (Feb 2018 – Jun 2021)

- **Developed classification Machine Learning and Deep Learning** models to flag potential data inconsistencies in AE case processing, **reducing overall error rate by 30%** after integration into QA workflows.
- **Performed root cause analysis (RCA)** and trend analysis using statistical methods to identify recurring quality issues; findings were translated into actionable process improvements.
- Led a team in processing and quality, ensuring compliance with regulatory standards.
- Conducted in-depth data analysis using Python and Excel to identify trends, optimize workflows, and generate weekly quality reports for senior stakeholders.

Education

M. PHARMACY (Pharmaceutics)

S.S.D.J. College of Pharmacy, Chandwad, Nashik (2016)

B. PHARMACY

Loknete Dr. J.D. Pawar college of Pharmacy (Manur) (2014)