# 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%.

## Serverless Blog Generator using Amazon Bedrock & AWS Lambda

- 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)

- Built Agentic RAG Generative applications enhancing automation and analytical depth.
- Conducted an R&D on Prompt Engineering task.
- Built machine learning (ML) models for classifying and prioritizing adverse event (AE) cases based on narrative and structured data.
- Managed and cleaned large datasets, ensuring data integrity
- Collaborated with cross-functional teams to streamline workflows, leveraging data insights to support regulatory compliance.

#### **IQVIA**

Operations Specialist I (June 2021 – Oct 2021)

- Built classification models on ICSR datasets (PMS & CT cases) 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** 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)