

# 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

### Token Attribution Analysis in AI-Generated Text (R&D Project)

- 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 AI-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 GenAI 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.
- Conducted **data analysis** on adverse event reports, utilizing **Python** to identify trends in pharmacovigilance data, **improving case processing efficiency by 20%**.
- 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)

- Performed **data analysis** on ICSR datasets (PMS & CT cases) using Excel and Python, identifying patterns in adverse events that led to a **15% reduction in duplicate case reporting**.
- Supported triage and data entry processes by developing automated Excel workflows, reducing manual errors by 25%.

## Tata Consultancy Services

Senior Process Associate

(Feb 2018 – Jun 2021)

- **Developed classification** 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)