Vashishth Raval

Data Scientist | Machine Learning Engineer

 Bengaluru   +91 8141 775959   vraval765@gmail.com   LinkedIn   GitHub   Portfolio

Skills

- **Programming & Systems:** Python (NumPy, Pandas, Scikit-learn), SQL (CTEs, Window Functions), Git
- **Statistical Analysis:** A/B Testing, Experimental Design, Hypothesis Testing, Confidence Intervals, Bias-Variance Tradeoff
- **Machine Learning:** Supervised/Unsupervised Learning, Feature Engineering, Ensemble Methods (LightGBM, XGBoost), Hyperparameter Optimization, Explainable AI (SHAP)
- **Deep Learning:** TensorFlow, Keras, Transformers, HuggingFace, Fine-Tuning, Representation Learning
- **Generative AI:** RAG, LangChain, LangGraph, Multi-Agent Systems, FAISS, Vector Databases, BGE Embeddings
- **MLOps & Cloud:** MLflow, DVC, Docker, FastAPI, REST APIs, CI/CD, Model Serving, AWS (S3, EC2)

Projects

TradeMind Pro | *Multi-Agent Financial Intelligence System*   GitHub | Video
- Automated institutional-grade hedge and mutual fund research workflows by engineering a multi-agent RAG system (Bull/Bear/Judge) using Mistral-7B-Instruct with LangGraph orchestration, real-time news ingestion, BGE embeddings, and FAISS for structured, evidence-backed adversarial investment analysis.
- Improved auditability of stochastic LLM outputs by implementing deterministic score aggregation and deploying a FastAPI service to deliver transparent BUY/HOLD/SELL decisions (API latency: 8.46 s).

InvestWise | *Hybrid Mutual Fund Recommendation Engine*   GitHub | Video
- Designed a hybrid recommender to help investors navigate 4,000+ mutual funds by combining K-Means clustering for segmentation and LightGBM for personalized risk profiling (Silhouette score: 0.42).
- Enhanced model transparency and trust by engineering financial risk indicators and integrating SHAP explanations into a FastAPI backend for real-time recommendations (API latency: 322 ms, R^2: 0.9513).

YouTube Sentiment AI | *MLOps & Influencer Analytics Platform*   GitHub | Video
- Built an end-to-end NLP pipeline to extract scalable sentiment insights from noisy comment streams using preprocessing, class balancing, and experiment tracking via DVC, MLflow, and Optuna (Macro F1: 0.94).
- Enabled real-time content moderation by developing a Chrome extension and backend API for live sentiment and controversy scoring (API latency: 317 ms, Accuracy: 0.936).

Work Experience — 2 Years 6 Months

Bankai Infotech Ltd   Jan 2023 – Jun 2025
Associate Business Analyst   *Ahmedabad, Gujarat*
- Analyzed 200M+ financial transactions ($90B in total value) and large-scale operational datasets across multiple leading African banks to support churn reduction and cross-sell strategy initiatives.
- Built executive dashboards and analytical reports for CXO-level stakeholders, enabling data-driven strategic and revenue-impacting decisions.
- Translated ambiguous business requirements across Wallet and Agency Banking platforms into structured PRDs, KPIs, and analytical frameworks aligned with business objectives.
- Defined data-backed acceptance criteria within Agile delivery cycles, reducing rework by 30% and improving overall release quality.

Education

Praxis Tech School | *PGD in Data Science & AI* (7.59/8.00)   Bengaluru, KA | 2025 – Present
Dhirubhai Ambani University | *M.Sc. in Data Science* (7.74/10.00)   Gandhinagar, GJ | 2021 – 2023
Charusat University | *B.Tech in Electrical Engineering* (7.32/10.00) Anand, GJ | 2016 – 2020

Achievements & Certifications

- **Applied DS Lab**, WorldQuant University   [Link]
- **LoR (AI & ML)**, Dr. V. Parapathy, IITB   [Link]
- **Unsung Hero Award**, Bankai Infotech   [Link]
- **Certified Banking Domain Professional**   [Link]
- **Certified Scrum Product Owner (CSPO)**   [Link]
- **National Player**, AIU Table Tennis 2019   [Link]