Vashishth Raval

Data Scientist | Machine Learning Engineer

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Professional Summary

Data Scientist with 2.5+ years of product-focused fintech experience and 5+ years of combined academic and industry experience in data science and analytics, specializing in applied machine learning, statistics, and end-to-end problem solving. Experienced in partnering with product and business stakeholders to build scalable, high-impact data solutions.

Skills

Programming & Data: Python (Pandas, NumPy), SQL

Machine Learning: Supervised and Unsupervised Learning, Feature Engineering, Model Evaluation, Hyperparameter Tuning, Experiment Design (A/B Testing), Imbalanced Data Handling

Deep Learning & NLP: Transformer-based Models, Text Classification, Embeddings, Fine-tuning

Statistics & Visualization: Hypothesis Testing, Statistical Modeling, Exploratory Data Analysis (EDA), Matplotlib, Seaborn, Tableau, Power BI

MLOps & Deployment: API Development (FastAPI), MLflow, Version Control (Git), CI/CD Pipelines, Optuna, Model Explainability (SHAP)

Projects

InvestWise: Mutual Fund Recommendation System   GitHub

- Developed a personalized mutual fund recommendation engine to reduce investor research effort by modeling user risk appetite, return expectations, and investment horizon using supervised and unsupervised learning approaches.
- Engineered 15+ financial features and applied K-Means, DBSCAN, and GMM with silhouette-based evaluation, improving fund-to-user alignment by 65% and reducing discovery time by 90%; deployed via FastAPI on Railway with frontend hosted on Netlify.

YouTube Sentiment AI – Sentiment Intelligence Platform   GitHub

- Built an NLP pipeline to analyze large-scale YouTube comments and extract real-time public sentiment signals through a Chrome Extension–based data ingestion workflow.
- Implemented TF-IDF + LightGBM with MLflow experiment tracking and Optuna-based hyperparameter tuning, deploying a real-time inference API on Render to enable continuous sentiment monitoring with a high F1-score.

Work Experience — 2 Years 6 Months

Bankai Infotech Ltd   Jan 2023 – Jun 2025
Associate Business Analyst   *Ahmedabad, Gujarat*

- Analyzed 200M+ transactions ($\sim$\$90B in value) along with large-scale operational datasets for a major African bank to support churn reduction and cross-sell strategy development.
- Delivered data-driven dashboards and market intelligence insights to CXO-level stakeholders, directly informing strategic and revenue-impacting decisions.
- Translated ambiguous business requirements across Wallet and Agency Banking platforms into structured PRDs, KPIs, and analytical data models, influencing product roadmap decisions.
- Defined data-backed acceptance criteria within Agile delivery cycles, reducing rework by 30% and improving overall release quality.

Education

Praxis Tech School   2025 – Present
Post Graduate Diploma in Data Science and AI (GPA: 7.59 / 8.00)   *Bengaluru, Karnataka*

Dhirubhai Ambani Institute of Information and Communication Technology   2021 – 2023
M.Sc. in Data Science (GPA: 7.74 / 10.00)   *Gandhinagar, Gujarat*

Achievements & Certifications

- **LoR (AI & ML)**: Dr. V. Parapathy, IITB
- **Unsung Hero Award**: Bankai Infotech Ltd
- Certified Banking Domain Professional (CBDP)
- Certified Scrum Product Owner (CSPO)