

Shail K Patel



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Summary

Third-year Machine Learning engineering student seeking a data analyst or ML internship. Experienced in NLP, data analysis, and predictive modeling using Python, PyTorch, and Scikit-learn. Passionate about LLMs, generative AI, and explainable AI, with proven ability to build impactful, data-driven solutions and contribute to research and real-world applications.

Education

LJ University

B.Eng in Artificial Intelligence and Machine Learning

2023 – 2027 (Expected)

Experience

Machine Learning Engineer

GetMySpace (Parking Management Startup)

Jan. 2025 – Jun. 2025

- Contributed to developing the prototype for real-time parking management using computer vision and ML.
- Built and deployed PyTorch models, reducing processing time to $\sim 4s$ with update latency of $\sim 0.7s$.
- Designed scalable backend and MongoDB to manage prediction outputs, user logs, and dynamic updates.

Publications

A Two-Stage, Leakage-Aware Framework for Early Academic Risk Detection in Undergraduate Engineering Cohorts

doi.org/10.5281/zenodo.17095218

Sep 2025

Projects

PredictGrad – Academic Risk Detection with ML

predictgrad.streamlit.app

Jun 2025

- Built regression and classification pipelines (Voting/Stacking with Ridge, CatBoost, BalancedBagging, ExtraTrees) to forecast marks and flag at-risk students.
- Delivered SHAP-based explanations and a risk dashboard; achieved MAE 5.16–7.10 and F1-score 0.51.

Beyond The Marks – Learning Impact & Bias Detection Tool

beyondthemarks.streamlit.app

Mar 2025

- Applied statistical + ML methods with SHAP to analyze performance, detect grading bias, and measure teacher effectiveness.
- Engineered indicators (avg. marks, attendance trends) and flagged bias when Shapley impact > 0.30 .

Constitution Preamble Clustering – NLP-Based Ideological Mapping

constitutional-values.streamlit.app

Oct 2025

- Utilized NLP and clustering (SentenceTransformer, KMeans) to analyze global constitutional texts and identify data-driven thematic clusters.
- Built an interactive dashboard with PCA and Plotly for visualization, interpretability and insight discovery.

Technologies

Python, Scikit-learn, TensorFlow, Keras, PyTorch, Pandas, NumPy, Streamlit, Flask, FastAPI, SciPy, Seaborn, PostgreSQL, MySQL, MongoDB, SQLite, Jupyter Notebooks

Skills

Supervised Machine Learning, Deep Learning, Neural Networks, SQL, NoSQL, Data Analysis, Statistical Analysis, Git, LLM, Data Preparation & Pipelines, Probability & Statistics