

Shail K Patel



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Summary

Enthusiastic Machine Learning Engineer with hands-on experience in end-to-end ML solutions and a strong interest in Large Language Models (LLMs), Natural Language Processing (NLP), and generative AI. Skilled in Python, PyTorch, and Scikit-learn, with projects in academic risk detection, explainable AI, and computer vision. Eager to contribute to real-world ML development while learning from experienced mentors.

Education

LJ University

July 2023 – Present

B.Eng in Artificial Intelligence and Machine Learning

- **Coursework:** TensorFlow, PyTorch, scikit-learn, Jupyter Notebooks, Pandas, Probability & Statistics

Experience

Machine Learning Engineer

Jan. 2025 – Jun. 2025

GetMySpace (Parking Management Startup)

- Contributed to developing the prototype for real-time parking management using computer vision and ML.
- Built and deployed PyTorch models, reducing processing time to ~4s with update latency of ~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

Sep 2025

doi.org/10.5281/zenodo.17095218

Projects

PredictGrad – Academic Risk Detection with ML

Jun 2025

predictgrad.streamlit.app

- 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

Mar 2025

beyondthemarks.streamlit.app

- 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.

Certifications

Stanford: [Supervised Machine Learning](#)

IBM: [Python for Data Science](#) , [Databases for Data Science](#) , [Tools for Data Science](#) , [Generative AI for Software Developers](#)

DeepLearning.AI: [Generative AI for Software Development](#) , [AI For Everyone](#) , [Generative AI for Everyone](#)

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