### Shail K Patel



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### Summary

Third-year Artificial Intelligence and Machine Learning engineering student seeking a full-time internship opportunity (college-approved). Experienced in developing and deploying end-to-end ML solutions, with hands-on work in computer vision, academic risk prediction, and explainable AI. Skilled in Python, PyTorch, and Scikitlearn, with a strong interest in Large Language Models (LLMs), NLP, and generative AI. Proven ability to build practical systems and publish research, with a focus on delivering measurable impact.

### Education

### LJ University

2023 - 2027 (Expected)

B.Eng in Artificial Intelligence and Machine Learning

### 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.
- $\circ$  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

Sep 2025

doi.org/10.5281/zenodo.17095218

### **Projects**

### ${\bf PredictGrad-Academic\ Risk\ Detection\ with\ ML}$

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.
- o 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.

### Certifications

Stanford: Supervised Machine Learning

IBM: Python for Data Science, Databases for Data Science, Tools for Data Science

### **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