

Shail K Patel

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EDUCATION

LJ University

July 2023 - August 2027

Degree: B.Eng in Artificial Intelligence and Machine Learning

WORK EXPERIENCE

GetMySpace

Jan. 2025 – Jun. 2025

Machine Learning Engineer

- Parking management startup using AI and automation for vehicle and space tracking.
- Developed the first AI-powered prototype for real-time parking management with computer vision + ML to automate vehicle/slot detection.
- Built and deployed models in Python/PyTorch, cutting processing time to ~4s with update latency ~0.7s. Designed backend logic and MongoDB systems to manage prediction outputs, user logs, and dynamic updates for scalable performance.

PROJECTS

[PredictGrad – Academic Risk Detection with ML](#)

Forecasted Semester 3 marks and flagged at-risk students via percentile drop analysis.

Built subject-wise regression models (Voting: Ridge, Lasso, ElasticNet) on Semester 1–2 data and a classification pipeline (Stacking: CatBoost, BalancedBagging, ExtraTrees) to detect ≥ 10 point drops.

Achieved MAE 5.16–7.10 (subject-wise) and F1-score 0.51.

Added SHAP-based explanations with a risk dashboard.

Tech: Python, Scikit-learn, CatBoost, LightGBM, SHAP, Streamlit.

[Beyond The Marks – Learning Impact & Bias Detection Tool](#)

Built a statistical + ML pipeline to analyze student performance and detect grading bias using SHAP/Shapley values.

Quantified teacher effectiveness via attendance and mark distribution, and engineered indicators (avg. marks, attendance trends) to assess learning outcomes.

Applied explainable AI to measure influence of student factors (attendance, gender, religion), flagging bias when Shapley impact > 0.30 .

Used one-hot encoding to isolate categorical effects and computed correlations across subjects and attendance.

PUBLICATIONS

Shail K. Patel, “A Two-Stage, Leakage-Aware Framework for Early Academic Risk Detection in Undergraduate Engineering Cohorts,” **Zenodo**, Sep 2025. DOI: [10.5281/zenodo.17095218](https://doi.org/10.5281/zenodo.17095218)

CERTIFICATIONS, SKILLS & INTERESTS

- **Certifications:** Stanford: Supervised Machine Learning: Regression and Classification, IBM: Python for Data Science, AI & Development, IBM: Databases and SQL for Data Science with Python.
- **Technologies:** Python; Scikit-learn; TensorFlow; Streamlit; Flask; PostgreSQL; MySQL; MongoDB.
- **Skills:** Supervised Machine Learning; Unsupervised Machine Learning; Deep Learning; Neural Networks; SQL; NoSQL; Data Analysis; Statistical Analysis.