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

- GetMySpace is a parking management solutions startup using AI and automation to streamline vehicle and space tracking.
- Developed GetMySpace's first AI-powered prototype for real-time parking management, integrating computer vision and machine learning to automate vehicle and slot detection.
- Built and deployed models using Python and PyTorch, reducing end-to-end processing time to **~4 seconds** and achieving real-time update latency of **~0.7 seconds**.
- Designed and implemented backend logic and MongoDB-based systems to handle prediction outputs, user logs, and dynamic updates, ensuring scalable and efficient performance.

PROJECTS

PredictGrad – Academic Risk Detection with ML

Forecasted Semester 3 marks and identified students at academic risk using predicted percentile drops.
Built subject-wise regression models (Voting Regressor: Ridge + Lasso + ElasticNet) using Semester 1–2 data.
Developed a classification pipeline (Stacking: CatBoost, BalancedBagging, ExtraTrees) to flag risk when percentile dropped ≥10 points
Achieved test MAE of 5.16–7.10 (subject-wise) and F1-score of 0.51 for risk detection.
SHAP-based explanations and 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 through impact on attendance and mark distribution.
Engineered indicators like average marks and attendance trends to assess learning outcomes.
Applied explainable AI to measure influence of student factors (e.g., attendance, gender, religion) on marks.
Flagged bias where sensitive attributes had Shapley impact > 0.30.
Used one-hot encoding to isolate categorical effects; computed correlations across subjects and attendance.

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; Deep Learning; Neural Networks; SQL; NoSQL; Data Analysis; Statistical Analysis.