## Suraj Chouhan







EDUCATION					
	Degree/Certificate	Institute	CGPA/%	Year	
M. Tech (Department of Management Sciences)		Indian Institute of Technology, Kanpur	-	2025- Present	
B. Tech (Agricultural Engineering)		CTAE, Agriculture University, Jodhpur	8.73 CGPA	2021-25	
Higher Secondary Education		Prathibha Public Senior Secondary school, Jodhpur	79.80 %	2020	
Secondary Education		Red Rose Public Senior Secondary School, Jodhpur	94.00%	2018	
PROJECTS					
PriceMyRide — Used Car Price Prediction   Machine Learning   Regression (GitHub Link)   August 2025 (Self Project)					
Objective	<ul> <li>Predicted used-car prices from 6,717 listings; parsed numeric strings, derived brand, removed nulls/duplicates, log- transformed skewed features.</li> </ul>				
Approach	Context: Predicted used-car prices from 6,717 listings; parsed numeric strings, derived brand, removed				
	nulls/duplicates, log-transformed skewed features.				
	<ul> <li>Process: FunctionTransformer → ColumnTransformer (One-Hot + Scaling) → model; 5-fold CV and held-out test set.</li> <li>Modeling/Analysis: Compared Linear, Ridge, Lasso vs RandomForest (n_estimators=400); selected RandomForest.</li> </ul>				
	Tools: Python, scikit-learn, Pandas, NumPy, Plotly				
	<ul> <li>Repo tagline: End-to-end car price prediction with log-aware preprocessing and RF (R<sup>2</sup> ≈ 0.93).</li> </ul>				
Result	<ul> <li>Results: Test R² = 0.929; MAE ≈ ₹73,000; linear baselines R² ≈ 0.87–0.89 (MAE ≈ ₹89k–₹93k).</li> </ul>				
Digital Mark	Digital Marketing Conversion Modeling   Machine Learning   Classification + Uplift (GitHub Link)   (Self Project)  August 2025				
Objective	•To predict the selling price of used cars using supervised regression on tabular automotive listings to support data- driven pricing and faster sales decisions.				
Approach	Context: Built an end-to-end conversion prediction and uplift modeling pipeline on 8,000 campaign records;				
	features span demographics, channel/type, engagement, and spend.				
	Process: ColumnTransformer (One-Hot + Scaling) inside an imbalanced-learning Pipeline with SMOTE; 5-fold				
	Stratified CV; held-out test evaluation; interactive PR/ROC and driver analysis.				
	<ul> <li>Modeling/Analysis: XGBoost classifier (n_estimators=300, max_depth=4, lr=0.1, subsample/colsample=0.8);</li> <li>threshold tuning for F1 and recall; Two-Model uplift (separate treatment/control models) with ranked targeting.</li> </ul>				
	Tools: Python, scikit-learn, imbalanced-learn, XGBoost, Pandas, NumPy, Plotly/Seaborn.				
	• Repo tagline: Conversion prediction with XGBoost and uplift ranking for campaign targeting; PR-AUC ≈ 0.94,				
Docult	<ul> <li>actionable thresholds, and top-20% uplift focus.</li> <li>PR-AUC 0.94, ROC-AUC 0.81; at threshold 0.552, accuracy 0.92 with high converter recall; uplift</li> </ul>				
Result	<b>(simulated):</b> top 20% +0.1	6 vs bottom 20% -0.15.	iverter recall;		
PM2.5 Forecasting (India)Growth   Time Series Regression   EDA (GitHub Link)   (Self Project)					
Objective	<ul> <li>To forecast hourly PM2.5 u vs R<sup>2</sup> 0.86, MAE 4.79).</li> </ul>	sing a RandomForest that outperforms a 24h persiste	ence baseline (	R <sup>2</sup> 0.97, MAE 2.22	
Approach	• Context: Forecasted hourly PM2.5 from 36,192 timestamps; created calendar features and 1h/24h lags; time-ordered 80/20 split to avoid leakage.				
	<ul> <li>Process: Built a RandomForest regressor and established a persistence baseline (t-24h); evaluated on held-out test window using R<sup>2</sup>, MAE, RMSE with side-by-side comparisonPerformed.</li> </ul>				
	Tools: Python, scikit-learn,				
		sting that beats a 24h persistence baseline by large n	nargins (R <sup>2</sup> 0.9	7 vs 0.86) with	
	hourly features and lags	, , , , , , , , , , , , , , , , , , ,	3 ( )	,	
Result	<ul> <li>Model R<sup>2</sup>=0.967, MAE=2.22 outperforming baseline.</li> </ul>	, RMSE=3.58 vs <b>Naive-24h R²=0.857</b> , MAE=4.79, RMS	SE=7.46 on tes	t, clearly	
COURSEWORK & SKILLS *in progress					
Relevant Data Mining and Knowledge Discovery*   Probability & Statistics*   Operations Research for Management*					
Courses	Introduction to Computing*				
Skills	Python  ML Libraries: NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn*   MySQL*   Excel				
Soft Skills   Flexibility   Adaptability   Team Management   Communication Skills   Leadership   Decision Making					
ACHIEVEMENTS & EXTRACURRICULAR  Second ALP 10 in CATE AC in 2025 agreed to the UT. Beauting					
<ul> <li>Secured AIR-10 in GATE AG in 2025 organised by IIT, Roorkee</li> <li>Secured AIR-171 in GATE AG in 2024 organised by IISC, Bengaluru</li> </ul>					
- Secured Air 1/1 in GRIE AG in 2024 Organised by ilse, bengalulu					