ASHWINI KUMAR

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EDUCATION

Degree/Certificate	Institute	CGPA / %	Year
M. Tech (Department of Management Sciences)	Indian Institute of Technology, Kanpur	-	2024 - Present
B. Tech (Civil Engineering)	MNIT, Jaipur	7.25 CGPA	2016-2020
Higher Secondary Education (UP Board)	Saraswati V M Inter College Hamirpur	91.4 %	2015
Secondary Education (Up Board)	Saraswati V M Inter College Hamirpur	87 %	2013

PROJECTS

Walmart Sales Prediction, USA |Machine Learning | Regression (GitHub Link) | (Self Project) — *July 2024*

Objective	Predicted Weekly Sales Using 8 features and a dataset with 6435 entries using Machine Learning Algorithms.
Approach	• **Data Preprocessing:** Managed null values, outliers (Interquartile Range - **IQR**), scaled variables (**StandardScaler**), identified collinearity (**correlation matrix, heatmap**), removed multicollinearity (Variance Inflation Factor - **VIF**) and selected features (**p-value significance**). • **Models Used:** Linear and Polynomial Regression, addressed overfitting with Ridge, Lasso, and Elastic Net. • **Toolset:** Pandas, Numpy, Matplotlib, Seaborn, Scikit-learn.
Result	Best performance achieved with Multiple Linear Regression: R^2 Score 0.9277, RMSE 157283.79.

Customer Conversion via Digital Marketing | Machine Learning | Classification (GitHub Link) | (Self Project) — *August 2024*

Objective	To Develop a Binary Classification Model to Predict Customer Conversion Through Digital Marketing Interactions
Approach	• **Preprocessing:** Treated null values, detected outliers, checked multicollinearity, **engineered features** (conversion_rate, cpa, ctr, avg_transaction_value), and addressed imbalance with **SMOTE**. • **Models Used:** Logistic Regression, Support Vector Classifier - SVC, Decision Tree, RandomForest, XGBoost with hyperparameter tuning (GridSearchCV). • **Tools:** Pandas, Numpy, Matplotlib, Seaborn, Scikit-learn, XGBoost, SMOTE (Synthetic Minority Oversampling Technique).
Result	Best performance achieved with XGBoost: Accuracy 0.90875, F1 Score 0.8992.

Customer Segmentation | Machine Learning | Clustering (GitHub Link) | (Self Project) — *August 2024*

Objective	Predicted customer segments using demographic data, marketing-specific metrics, customer engagement indicators, and spending behavior data.
Approach	● Performed data visualization, including histograms, count plots, and scatter plots, to understand the relationships between features. ● Applied **K-Means clustering** for segmentation: Age & Spending Score, Annual Income & Spending Score, Age, Annual Income & Spending Score. ● Plotted the inertia using the **Elbow Method** to select the optimal number of clusters for each segmentation. ● Visualized the clusters and their boundaries for better interpretation.
Result	Successfully segmented customers into distinct groups using K-Means clustering, allowing for targeted marketing strategies based on demographic and behavioral data.

COURSEWORK & SKILLS   **in progress*

Relevant Courses	**Statistical Modelling** for Business Analytics*	**Probability** & **Statistics***	Operations Research for Management*	Introduction to Computing*
Skills	Python	ML Libraries: NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn	MySQL*	Excel
Soft Skills	Analytical Ability| Decision Making	Problem Solving| Communication Skills	Leadership	Team Management	

POSITION OF RESPONSIBILITY

Class Representative | M. Tech. | DoMS | IIT Kanpur
- Represents the batch in official/unofficial matters. Coordinate with DPGC and department office for all academic work if needed.

Class Representative | B. Tech. |Civil Engineering | NIT Jaipur
- Represented the batch in official/unofficial matters. Coordinate with department office for all academic work if needed.

Chief Mentor | Student Mentorship Program |NIT Jaipur
- **Led a team of 29**, including 3 mentors, 8 sub-mentors per mentor, one other chief mentor, and myself.

Mentor | Student Mentorship Program |NIT Jaipur
- Managed a team of 8 sub-mentors and mentored 100 first-year students.

Sub-Mentor | Student Mentorship Program |NIT Jaipur
- Mentored 12 first-year students

ACHIEVEMENTS & EXTRACURRICULAR

- Organized Scholars Cup 2K19, a major event with 700 participants (70 Teams of 10)
- **First Runner up** of MNIT's FINEST Comedian at MNIT Jaipur
- **Semi-finalist** of Armageddon an international Event (Robowars) in Cognizance at IIT Roorkee