



# Saddam Husain

## Data Scientist | Dubai

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## PROJECTS TECH STACK

### Online Retail Customer Segmentation

AlmaBetter Verified Project 

03/2023-04/2023

*Tags : Clustering, K Means Clustering, RFM model, Elbow method, Silhouette score, hierarchical clustering, dendrogram, optimal cluster, DBSCAN clustering, TF-IDF, tokenization.*

- o Built a **Clustering model** using **K means clustering, Agglomerative clustering** to identify major **customer segments** on a transactional data set that contains all the transactions occurring between 01/12/2010 and 09/12/2011 for a UK-based and registered non-store online retail.
- o Applied **feature engineering** to obtain new features such as **Recency, Frequency, Monetary, busiest days, busiest time, month RFMGroup**, and **RFMScore** for getting more details about the customer.
- o Obtained the optimal number of clusters using **Silhouette Analysis** and **Elbow Method** and similarly identified the optimal clusters at the threshold 85 by **visually inspecting the dendrogram from hierarchical clustering**.

### Credit Card Default Prediction

AlmaBetter Verified Project 

02/2023-03/2023

*Tags: Classification, KS Statistic, Gains table, SMOTE, Hyperparameter Tuning, SHAP Interpretability, Extreme, Gradient Boosting.*

- o Developed a binary classification model using algorithms such as **Logistic Regression SVC** and **XGBoost** to predict whether a customer will default on credit card payments.
- o Engineered a new class of attributes known as **decayed field variables** and developed out-of-pattern variables on historical credit and bureau data to identify risky customers and **reduced default rate** from 8.3% to 6.5%.
- o Performed missing value imputation using **KNN-Imputer**, implemented **SMOTE boosting** to oversample the minority class observations and carried out **hyperparameter tuning** using **Bayesian optimization**.
- o Obtained Model Reason Codes (MRCs) by leveraging the concept of **SHAP** plots to cater to customer grievances and analyzed the **Gains table** to decide rejection cutoff.

## INTERNSHIPS

### Internship from Internshala

11/2021 – 01/2022

That was an awesome internship where I have learned **supervised** and **unsupervised** machine learning **models** and implemented in many projects. I had learned ML algorithms like **Linear Regression, Logic Function, Decision Trees, K Nearest Neighbors, Random Forest, SVM, PCA, Clustering** and many more **algorithms**.

## EDUCATION

### B.Tech in Computer Science

SR Institute of management & technology Lucknow 2019 – 2023

Affiliated from **AKTU**

## SKILLS

### TECH STACK Languages-

Python, PostgreSQL, SQL, C, Java, HTML, CSS

### ML Frameworks-

Scikit-learn, NLP, spaCy, Keras, Pandas, Numpy, Matplotlib, Seaborn, PyTorch, Pyplot, Neural Networks

### Platforms-

Advance Excel, Power BI, Tableau, Jupyter Notebook, GitHub, Visual Studio code,

## CERTIFICATIONS

Data Science Certification at **FastLane Career - 2023**

Data Science Certification at **AlmaBetter - 2023**

Data Science Certification at **Coursera – 2022**

## ACHIEVEMENTS

SQL 5 star on **HackerRank**   
Python 5 star on **HackerRank** 

## INTERESTS

Hiking, Photography,