E-Commerce Analytics

DATA SCIENCE PROJECT

ABSTRACT :

In this project, you will analyze and segment the customers of an e-commerce company by using the RFM approach.
This will enable the e-commerce company to optimize their retention and acquisition strategies.

Market Outlook:

E-commerce stores which became success stories were successful in targeting the desired customers. One of the techniques by which they were able to achieve this was customer segmentation i.e. by segmenting the existing customers based on frequency of purchases, monetary value etc. E-commerce stores who designed market strategies based on mass marketing soon realized the need of customer segmentation as an alternative to save cost and efforts in the digital sphere. In a real-world segmentation scenario, there might be hundreds of variables which can be used but broadly they segment the customers by the following characteristics:

Geographic - Segments based on country, state, and city.

Demographic - Segments based on gender, age, income, education level, etc.

Psychographic - Segments based on geography, lifestyle, age and religious beliefs, etc.

Behavior - Segments based on consumer personality traits, attitudes, interests, and lifestyles.

Overview of the problem : You have been provided with a single file which contains data related to the ecommerce transactions. This data contains the date-time of sale, customer shipping location, and price of single unit from 2016 to 2017.

Data and Problem Detail : Your organization has asked you to draw meaningful insights from 2 years of data & provide brief details based on the monetary value, frequency of buy, etc.

Objective : Build an unsupervised learning model which can enable your company to analyze their customers via RFM (Recency, Frequency and Monetary value) approach.

Steps to be followed:

1. Understand the problem and objectives
2. Understand the data & develop some business sense
3. EDA (if you require in this case)
4. Provide the results and understanding you got by performing exploratory data analysis.
5. Data Cleaning
6. Model building (trying various techniques and at the end justify why you choose a technique over the others)
7. Testing and cross validation
8. Recommend top 5 combination of partners-managers.
9. For every false prediction calculate the loss which the company will face.
10. Find the results, recommendation and visualizations.
11. Bonus: Any other insight or recommendation that you can give from the data which will help the business(optional)
12. Preparing the deck

The final solution should be in the form of a deck showing all the steps above. It will be judged on the following criteria:

- How well you have adhered to the modeling process discipline.
- Do your results make business sense, how have you used business intuition to take decision during the modeling exercise, including but not limited to the following?
- Deciding Segmentation (in case you choose it)
- EDA and Feature engineering
- Variable and Model selection
- Performance of your model