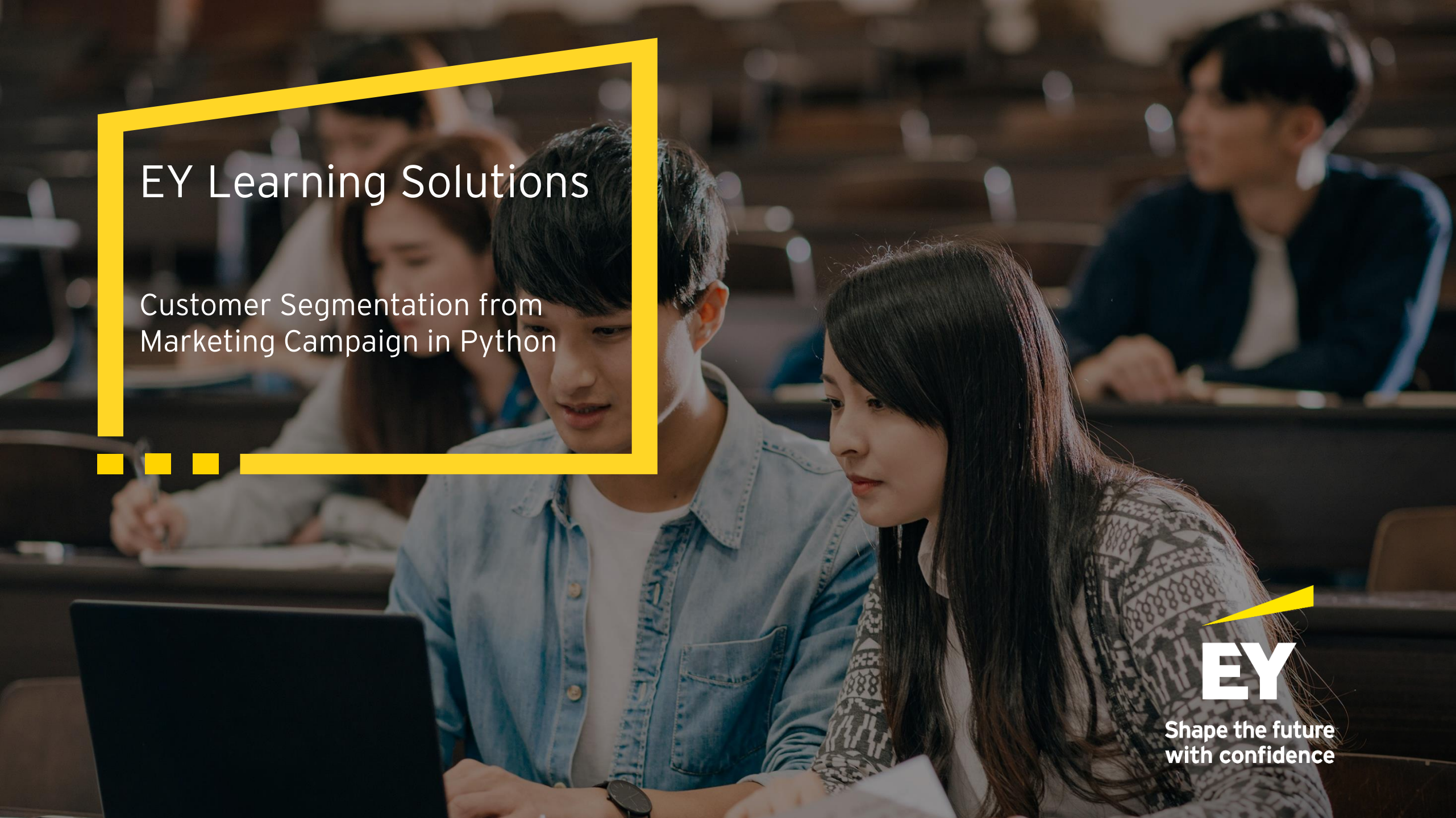
EY Learning Solutions
Customer Segmentation from Marketing Campaign in Python
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RFM Analysis at Greenleaf Grocery Store

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Background

In the competitive world of grocery retail, understanding customer behavior is crucial for creating effective marketing campaigns. By identifying the right audience and tailoring strategies to their preferences, Greenleaf Grocery Store aims to boost sales and enhance customer loyalty. One of the most powerful methods for achieving this is RFM (Recency, Frequency, Monetary) analysis.

In this case study, we explore how Greenleaf Grocery Store uses RFM analysis to evaluate and optimize their marketing campaigns. The store segments its customers based on three key attributes:

- **Recency**: The time elapsed since a customer's last purchase. Customers who shop more recently are typically more engaged and responsive to marketing efforts.
- **Frequency**: How often a customer makes a purchase. Frequent shoppers are often considered loyal customers, and understanding their shopping habits can guide future promotions.
- **Monetary**: The total amount a customer has spent. High-spending customers are prime targets for exclusive offers and personalized marketing.

By analyzing customer data with these three attributes, Greenleaf Grocery Store can craft more effective, targeted marketing strategies that increase customer engagement and satisfaction.

Dataset Description

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Dataset Description

Column Names	Description
AcceptedCmp1	1 if customer accepted the offer in the 1st campaign, 0 otherwise.
AcceptedCmp2	1 if customer accepted the offer in the 2nd campaign, 0 otherwise.
AcceptedCmp3	1 if customer accepted the offer in the 3rd campaign, 0 otherwise.
AcceptedCmp4	1 if customer accepted the offer in the 4th campaign, 0 otherwise.
AcceptedCmp5	1 if customer accepted the offer in the 5th campaign, 0 otherwise.
Response (target)	1 if customer accepted the offer in the last campaign, 0 otherwise.
Complain	1 if customer complained in the last 2 years.
DtCustomer	Date of customer's enrollment with the company.
Qualification	Customer's level of education.
Marital	Customer's marital status.
Kid	Number of small children in customer's household.
Teenhome	Number of teenagers in customer's household.
Income	Customer's yearly household income.
MntFishProducts	Amount spent on fish products in the last 2 years.
MntMeatProducts	Amount spent on meat products in the last 2 years.
MntFruits	Amount spent on fruit products in the last 2 years.
MntSweetProducts	Amount spent on sweet products in the last 2 years.
MntWines	Amount spent on wine products in the last 2 years.
MntGoldProds	Amount spent on gold products in the last 2 years.
NumDealsPurchases	Number of purchases made with a discount.
NumCatalogPurchases	Number of purchases made using a catalog.
NumStorePurchases	Number of purchases made directly in stores.
NumWebPurchases	Number of purchases made through the company's website.
NumWebVisitsMonth	Number of visits to the company's website in the last month.
Recency	Number of days since the last purchase.

Problem Statements

1. Show which customer has shown the campaign most of the times (Distribution of ID in a Bar Graph)
2. Show distribution based on Numerical Variables in a Histogram
3. Show Campaign Accepted and Rejected comparison for all the % campaigns
4. Show Categorical Distribution in a Bar Chart
5. Calculate RFM Metrices and make a new dataframe (Recency, Frequency and Monetary)
6. Describe and info the Above Metrices
7. Calculate the RFM Scores
8. Create & Analyse the RFM Segments

   seg_map = { r'[1-2][1-2]': 'hibernating', r'[1-2][3-4]': 'at_Risk', r'[1-2]5': 'cant_loose', r'3[1-2]': 'about_to_sleep', r'33': 'need_attention', r'[3-4][4-5]': 'loyal_customers', r'41': 'promising', r'51': 'new_customers', r'[4-5][2-3]': 'potential_loyalists', r'5[4-5]': 'champions' }

   (RFM Segments based on Scores)
9. Create a Treemap Matrix for RFM Segments Distribution
10. Perform Analysis and Share your findings based on the above


Thank you