

# Customer Analysis

16<sup>th</sup> August 2023

## OVERVIEW

A well known company with numerous products needs to analyze their customer behavior and classify them whether they will accept the campaigns held by the company. Also, cluster the customers into different segments.

Create a model using : [Train Dataset](#)

## GOALS

The objective of this exercise is to build a model, using historical data Focus on all steps of data science (EDA, data processing, model, evaluation, charts)

1. Highlight any trend in data, deep insight, novel steps that you take
2. Highlight next steps and improvements.
3. Apply classification and clustering machine learning algorithms and evaluate it using [Test dataset](#).

## Data Dictionary

### People

- ID: Customer's unique identifier
- Year\_Birth: Customer's birth year
- Education: Customer's education level
- Marital\_Status: Customer's marital status
- Income: Customer's yearly household income
- Kidhome: Number of children in customer's household
- Teenhome: Number of teenagers in customer's household
- Dt\_Customer: Date of customer's enrollment with the company
- Recency: Number of days since customer's last purchase
- Complain: 1 if the customer complained in the last 2 years, 0 otherwise

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## Products

- MntWines: Amount spent on wine in last 2 years
- MntFruits: Amount spent on fruits in last 2 years
- MntMeatProducts: Amount spent on meat in last 2 years
- MntFishProducts: Amount spent on fish in last 2 years
- MntSweetProducts: Amount spent on sweets in last 2 years
- MntGoldProds: Amount spent on gold in last 2 years

## Promotion

- NumDealsPurchases: Number of purchases made with a discount
- 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: 1 if customer accepted the offer in the last campaign, 0 otherwise

## Place

- NumWebPurchases: Number of purchases made through the company's website
- NumCatalogPurchases: Number of purchases made using a catalogue
- NumStorePurchases: Number of purchases made directly in stores
- NumWebVisitsMonth: Number of visits to company's website in the last month