

# Black Friday prediction

Black Friday refers to the dayfull of shopping deals and big discounts on electronics and toys and other gifts.it is the busiest shopping day of the year in the united states.In this problem statement a retail company wants to understand the customers purchase behaviour.



# understanding

- This becomes associated that the stores operate at a loss throughout the year and are able to earn a profit on the day after thanks giving
- This dataset comprises of sales transaction of a retail store.
- Purchase summary of various customers is shared.

# understanding

- This dataset contains various demographics such as (age ,gender,marital\_status,city\_type),product\_details,purchase\_amount of last month.
- Various black Friday marketing strategies is to be followed to attract the customers.
- Such as offering discounts,free gifts,extra items and free shipping.

# EDA

- EDA is exploratory data analysis
- Which includes the following:-
- Checking the shape (`.shape`) gives the number of rows and columns.
- Checking the description (`.describe()`) gives the count, mean, standard deviation, max and min value and quartiles.
- See the datatypes of columns (`.dtypes`) and if they are object change them into integer and float.

# EDA

- Checking for nulls (using `.isnull().sum()`) and treat them using imputers.
- Checking the datatypes of columns and encoding them using label encoder to make it numeric as computer only understands numeric data.

# Data visualization

- This includes visualizing the data as we can better understand through charts and graphs.
- For that importing necessary libraries.
- Checking for skewness using distplot.
- Visualizing categorical data using countplot.
- Plotting Heatmap to check the correlation between features.

# Model building

- Train, test and split the data.
- After preprocessing model initializing and model building .
- Check for accuracy.
- Cross validation and hyper parameter tuning is necessary.
- Thank you