

### **Why E-Commerce Business**

 We spend our daily time more on the internet for work, study, marketing, business, learning, and entertainment.
Now all these commercial and social activities are connected to the internet. And without e-Commerce the world around the internet is impossible. That's why e-Commerce is important in our daily life

 In this project some keys business insights are highlighted which can be an indispensable part of business strategies of an e-retail firm.



## DATA DICTIONARY

The data is collected from some reliable online sources and the features in the data are listed below:

- 1. Order ID
- 2. Product ID
- 3. Shipping ID
- 4. Customer ID
- 5. Customer Name
- 6. Sales
- 7. Discount
- 8. Profit
- 9. Shipping cost
- 10. Product Base Margin
- 11. Order Quantity
- 12. Product category
- 13. Product sub-category
- 14. Province
- 15. Region
- 16. Customer segment

#### **LIBRARIES & PACKAGES USED**

Numpy

It denotes Numerical Python, used for multi-dimensional array oriented computing

**Pandas** 

It is a data analytics library used for manipulation, visualization, model building of panel data

Matplotlib & Seaborn

Matplotlib is used for basic plotting and seaborn is used for variety of visualization patterns

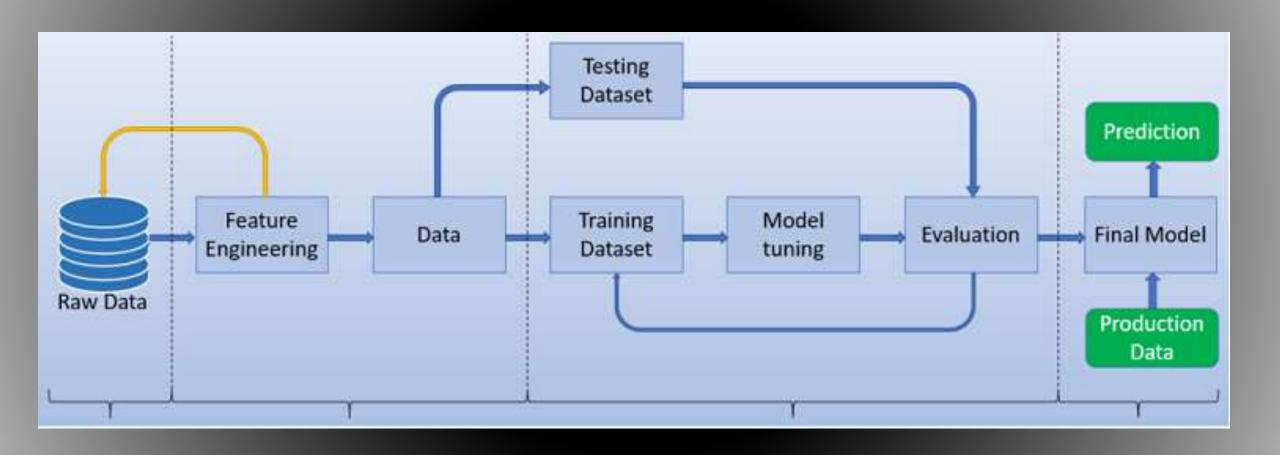
Scikitlearn

It provides a wide range of supervised and unsupervised machine learnings algorithms

Keras

It is an open-source library that provides an interface for building artificial neural networks.

### PIPELINE OF THE TASKS PERFORMED



# A Brief overview of the Project

Data Cleaning

- Filling Null values Mean Imputation
- Outlier detection and treatment.
- Feature scaling

Classification task

- Logistic Regression model
- SVM model
- Naïve Bayes model
- KNN model
- Decision tree model
- Random forest model
- XGBoost model & CNN architecture



Exploratory Data Analysis

- Data visualization using matplotlib, seaborn
- Diagrammatic representation using joint-plot, bar plots, boxplots

Regression task

- Linear Regression model
- Random forest Regressor
- XGBoost Regressor
- Light LGBM Regressor