



# Exploratory Data Analysis(EDA)



# Definition

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Exploratory Data Analysis (EDA) can be derived as a process of exploring or analyzing the data in different ways to derive insights from the data.

EDA plays a crucial role in data analytics and data science.

Once the EDA is performed on the dataset, it is used for statistical modelling and machine learning.

EDA is helpful to data scientists to find trends, patterns or hypothesis testing.

# Basic components of EDA

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Descriptive Statistics

Data Cleaning

Data Transformation

Relationship between variables

Data Visualization

# Understanding Data

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To understand data few functions are performed

Head

Tail

Shape

Describe

Info

# Descriptive statistics

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Mean

Median

Count

Variance

Standard Deviation

IQR

Mode

Range

Percentile

# Data Cleaning

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Handling Missing Values

Handling Null Values

Handling Duplicated

Deleting unnecessary column

Changing Columns format

# Data Transformation

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Normalization

Standardization

Categorical Encoding

Feature Engineering

Imputations

# Relationship between variables

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Univariate Analysis

Bivariate Analysis

Multivariate Analysis

## Data Visualization

The visual display of the plots and charts of the data derives insights and complex data relationships which can be easily understood to non-technical clients also.



# EDA can be performed using

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Python

R

SQL

Excel

Tableau

Power BI



Thank You