# Exploratory Data Analysis

## Continuous Data

* *Measures of Central Tendency*
  + *Mean*
  + *Median*
  + *Mode*
* *Measure of Dispersion*
  + *Variance*
  + *Standard Deviation*
  + *Coefficient of Variation*
  + *Percentile*
  + *Range*
  + *Interquartile Range (IQR)*
* *Measures of Shape*
  + *Skewness*
  + *Kurtosis*

## Discrete Data

* *Frequency*
* *Class Balance*

## Visualizations

* *Bar Chart (Discrete Data)*
* *Pie Chart (Discrete Data*
* *Box Plot (Continuous Data)*
* *Histogram (Continuous Data)*
* *Scatter Plot (Continuous Data)*
* *Q-Q Plot (Normality)*

## Statistical Tests

* *Normality Test*
  + *Pearson’s Chi-Squared Test*
  + *Shapiro-Wilk Test*
  + *D’Agostino’s K^2Test*
  + *Anderson-Darling Test*
* *Multicollinearity* 
  + *Variance Influence Factors (VIF)*
* *Correlation Test*
  + *Pearson’s Correlation Coefficient (Linear Relationship)*
  + *Spearman’s Rank Correlation (Monotonic Relationship)*
  + *Kendall’s Rank Correlation (Monotonic Relationship)*
  + *Chi-Squared Test (Test for independence of two samples)*
* *Hypothesis Test (Significantly Different Test)*
  + *Student’s t-test*
  + *Analysis of Variance Test (ANOVA)*
* *Nonparametric Test (Significantly Different Test)*
  + *Mann-Whitney U Test*
  + *Wilcoxon Signed-Rank Test*
  + *Kruskal-Wallis H Test*
  + *Friedman Test*