

Statistics

Descriptive Statistics  
Measures of Central Tendency  
Mean  
Median  
Mode  
Measures of Dispersion  
Variance  
Standard Deviation  
Normal Distribution  
Standard Normal Distribution  
Central Limit Theorem  
Z-Score  
Correlation  
Covariance  
Skew  
Kurtosis

Inferential Statistics  
Regression Analysis  
Single Linear Regression , Assumptions  
Multiple Linear Regression , Assumptions  
Lasso, Ridge, Elastic-Net  
Boosting, Bagging  
Regularization (L1, L2)  
Analysis of Variance (ANOVA)  
Ordinary Least Squares  
t-stat  
F-Score  
Significance Levels  
Hypothesis Testing  
Null, Alternative Hypothesis  
Confidence Intervals  
Type I, II Errors  
Alpha  
Beta  
Power

Classification  
Logistic Regression  
Decision Tree  
Random Forest  
Support Vector Machine (SVM)  
K-Nearest Neighbors (K-NN)

Statistical Learning

1) Linearity  
2) iid  
3) Normality  
4) Homoskedasticity  
5) Endogeneity  
6) Multicollinearity  
Residuals  
SSE, SSR, SST  
 $R^2$ , Adjusted  $R^2$   
LUE, BLUE  
Bias  
Variance/Bias Trade-off

Time-Series Analysis and Forecasting

Autocorrelation      Auto-Regressive Model  
Stationarity          Moving-Average Model  
White Noise          ARMA Model  
Differencing          ARIMA Model  
Decomposition        SARIMA Model  
Trend                  "      Variants  
Seasonality  
Cross-Correlation  
Cointegration

Population  
Sample  
Random Sampling  
Sampling Error/Bias/Mistakes