Statistical Hypothesis Test

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1 Overview

Typical statistical test involves 7 steps

1. Identify the problem
2. State the null and alternative hypothesis
3. Choose a test statistic
4. Choose a significant level
5. Find the critical region for the test
6. Calculate the test statistic
7. Reject the null if the test statistic falls within the critical region.

This summary primarily focuses on the first 3 steps.

2 Stationarity of time series

Dicky-Fuller Test

Augmented Dicky-Fuller Test

ADF-GLS Test

Kwiatkowski?Phillips?Schmidt?Shin Test

Phillips?Perron Test

3 Autocorrelation in residuals from a regression analysis

Durbin-Watson Test

Ljung-Box Test

Breusch-Godfrey Test

4 Model Comparison

Likelihood-Ratio Test

F test

Durbin?Wu?Hausman Test

5 Two-Sample Test

Wilcoxon Signed-Rank Test

Paired Student's t-Test

Kruskal-Wallis Test

Friedman Test

Ansari-Bradley Test

Bartlett?s Test

Levene Test

Fligner?s test

6 Cointegration

Johansen Test

7 Samples from Specific Distributions

Anderson-Darling Test

Shapiro-Wilk Test

Jacque-Bera Test

Manny-Whitney U Test

Median Test

8 Heteroskedasticity Indentification

Breusch-Pagan Test

9 Regression Analysis

Pearson's χ^2 Test

Kolmogorov?Smirnov Test

Wald Test