Exploratory data anslysis

Regression:

ANOVA, t-test, regression, linear models, hypothesis testing, interaction and confounding

Nonparametric Methods:

Rank based methods:

Nonparametric inferential techniques:

Wilcoxon test

Signed rank test

Time series:

MA

SARIMA

Seasonality

Forecasting

Survey:

Clustering

Computational Statistics/Bayesian

Markov Chain Monte Carlo

Gibbs Sampler

Metropolis-Hastings

Bootstraping

Borrowering strength

Hierarchical models

Change point analysis

Maximum Likelihood estimation

t-tests, test the mean of a normal population if varaince is unknown, test if the mean to two pops is the sameassuming a common pop.variance.

chisquared test: test the varaiance of a normal pop if mean I unknown

f-tests, test if coefficients are SS (ANOVA), test is indi random samples have the same variances

independent sample tests

paired sample tests

likelihood ratio tests

multivariate:

Principal Component Analysis