

Overview of statistical functions

Descriptive statistics

cor.sci - correlation
cor_mat - correlation matrix
cvr.sci - covariance
cvr_mat.sci - covariance matrix
iqr.sci - inter-quartile range
meansq.sci - mean of squares
median.sci - median
modus.sci - modus
qq_graph.sci - qq-graph
quantile.sci - quantile
range.sci - range
ranks.sci - ranks of data
std.sci - standard deviation
sumsq.sci - sum of squares
table.sci - frequency table
var.sci - variance (sample)
varp.sci - variance (population)

Confidence intervals

prop_int.sci - interval for proportion
prop_int_2.sci - interval for two proportions
t_int.sci - interval for expectation (known variance)
t_int_2n.sci - interval for two proportions (independent samples, different variances)
t_int_2p.sci - interval for two proportions (paired samples)
t_int_2s.sci - interval for two proportions (independent samples, equal variances)
var_int.sci - interval for variance
z_int.sci - interval for expectation (unknown variance)

Tests of hypotheses

– parametric

prop_test.sci - test for proportion
prop_test_2.sci - test for two proportions
t_test.sci - test for expectation (unknown variance)
t_test_2n.sci - test for two expectations (independent samples, different variances)
t_test_2p.sci - test for two expectations (paired samples)
t_test_2s.sci - test for two expectations (independent samples, equal variances)
var_test.sci - test for variance
var_test_2.sci - test for two variances
z_test.sci - test for expectation (known variance)
z_test_2.sci - test for two expectations (known variance)

– **nonparametric**

anderson_test.sci - test for normality
cor_test.sci - test for independence
cramer.sci - test for association
friedman_test.sci - test for equality of medians
chisquare_test.sci - test for equality of observed and expected frequencies
chisquare_test_h.sci - test for homogeneity
chisquare_test_i.sci - test for independence
kolmogorov_test.sci - test for distribution type
kruskal_test.sci - test for equality of several medians (nonparametric anova)
lambda.sci - test for association
mannwhit_test.sci - test for equality of medians - independent samples
mcnemar_test.sci - test for a change after an action
residual_f_test.sci - test for residual independence
residual_z_test.sci - test for independence of residuals
shapiro_test.sci - test for normality
scheffe_test.sci - post anova test
sign_test.sci - test for equality of two medians
wilcoxon_test.sci - test for two medians - paired samples

– **anova and regression**

ancova.sci - test for equality of several expectations with regression
anova.sci - test for equality of several expectations
anova_2.sci - anova with two factors
anova_2rep.sci - anova with repetitions
anova_reg.sci - anova based on regression
bartlett_test.sci - test of equality of several variances
exp_pred.sci - exponential prediction
exp_reg.sci - exponential regression
f_test_pred.sci - F-test of regression based on predictions
f_test_reg.sci - F-test of suitability of linear regression
lin_pred.sci - linear prediction
lin_pred_n.sci - multivariate linear prediction
lin_reg.sci - linear regression
lin_reg_n.sci - multivariate linear regression
pca_eig.sci - data reduction using eigenvalues
pca_svd.sci - data reduction using singular value decomposition
plot_reg.sci - plot regression results
pol_pred.sci - polynomial prediction
pol_reg.sci - polynomial regression
reg_desc.sci - calculate coefficients of linear regression
t_test_reg.sci - test of quality of linear regression