OurTools – an R package of Structured Statistical Analysis

Data Control

MergeWithMaster controlled merging
MissingRateTable Variable hit list of NA
MoveAfter safely rearrange columns in data.frame

Positive ordinal comparators

EQ positive ==
GE positive >=
GT positive >
LE positive <=
LT positive <
NE positive !=

Factor manipulation

NAasLevel Make NA al level
Level2NA Set a level to NA

Export

Df2Csv data.frame to csv file
Df2Rdata data.frame to Rdata for analysis report
ReconcileLists update query-lists communication with DM

Utility functions

Nvalid count valid values
Nmissing count NA
CountValue count specified value
TrimStr remove leading/trailing blanks
PruneVarName Prune deparse(substitute(X)) for nice LABs in plots
NoUmlaute replaces German Umlaute and ß preserving the class.

ScaleTransformations (used in plots)

T_Logit logit and logit inverse
T_Log_B log(x,B) and B^y
T_Power_Z x^Z and inverse

Metric Variables - Numeric Tables

MetricBySplit Table describing one metric
MetricsBySplit Table describing one or many metric variables by groups
LocationScaleEstimates Estimates and CIs
PseudoMedian Calculate Pseudomedian
ProversionProb Calculate Proversion Probability
ModalValue Modal value of metric variable
CorDiffCI CI for difference of two independent correlation coefficients.
CompareMetricBySplit Estimates of Mean difference, Pseudomedian difference, and Proversion probability with CIs and respective t-test and MW-test
Glm2Df Knitrable summary of glm/lm

Metric Variables – Plots (with various scales and Outlier detection)

NiceHist Histogram with Density (determine scale, check outliers)
PlotMetricBySplit Grouped Ecdf plot (or Dens, boxplot and stripchart)
PlotDepMetrics Wraps PlotMetricBySplit to dependent metrics
ScatterPlot With principal component and regression lines and subgrouping
SymLine plot principal component line

Bug reports, comments, and suggestions please to: *dirk.hasenclever@imise.uni-leipzig.de*

OurTools – an R package of Structured Statistical Analysis

Ordinal/Count data

CountBarplot without gaps
PlotOrdinalCourse time course of ordinal (e.g. Tox grades)

Factor / Binary - Numeric Tables

FacTable Frequency table of a factorial variable with sort option
Table table with addmargins (CAVE: array)
Matrix2Df Convert matrix to data.frame
CrossTabs k x m table with intercalated %
FactorsBySplit table one or many factors by a grouping factor SPLIT
SuccessRate estimate probability with CI
CompareSuccessRatesBySplit Table of rate difference, odds ratio, and relatve risk with CIs and respective tests
BinaryAssociation Table of measures of association: Yules_Q, Yules_Y, cor, OR, logOR
ConfusionTableStatistics Statistics of concordance
NiceVennDiagram draws a Venn diagram and returns a data.frame with pattern frequencies and proportions.

Factor / Binary - Plots

PlotBinaryByMetric Plot Binary versus Metric with logistic regression curve and Lowes-smoother

Time to event - Numeric Tables

QuantilesSurvivalCurve read off quantiles
SurvivalAtT read off rate at t with CI
UnivariateCoxTable table with univariate COX regressions for specified variables.
Cox2Df knitrable summary of coxph

Time to event - Plots

NiceSurvPlot Kaplan Meier plot with various statistics
FollowUpPlot Quality of follow up plot
DataMaturityPlot compare EFS with EFSfudged
MartingalePlot to investigate the functional form of a metric covariate
LhrPlot Investigate cut-values
VisualiseCoxModel Cox-model based curves for specified covariates constellations
NiceCumIncPlot cumulative incidence curve plot in competing risk analysis

Bug reports, comments, and suggestions please to: *dirk.hasenclever@imise.uni-leipzig.de*