

Changes on CRAN

by Kurt Hornik and Friedrich Leisch

New contributed packages

- DAAG** various data sets used in examples and exercises in the book Maindonald, J.H. and Braun, W.J. (2003) "Data Analysis and Graphics Using R". By John Maindonald and W. John Braun.
- Devore6** Data sets and sample analyses from Jay L. Devore (2003), "Probability and Statistics for Engineering and the Sciences (6th ed)", Duxbury. Original by Jay L. Devore, modifications by Douglas Bates.
- Hmisc** The Hmisc library contains many functions useful for data analysis, high-level graphics, utility operations, functions for computing sample size and power, importing datasets, imputing missing values, advanced table making, variable clustering, character string manipulation, conversion of S objects to LaTeX code, and recoding variables. By Frank E Harrell Jr, with contributions from many other users.
- HyperbolicDist** This package includes the basic functions for the hyperbolic distribution: probability density function, distribution function, quantile function, a routine for generating observations from the hyperbolic, and a function for fitting the hyperbolic distribution to data. By David Scott.
- VaR** A set of methods for calculation of Value at Risk (VaR). By Talgat Daniyarov.
- bim** Functions to sample and interpret Bayesian QTL using MCMC. By Brian S. Yandell, Hao Wu.
- boolean** A procedure for testing Boolean hypotheses. By Bear F. Braumoeller, Jacob Kline.
- cat** Analysis of categorical-variable with missing values. Original by Joseph L. Schafer. Ported to R by Ted Harding and Fernando Tusell.
- classPP** PP Indices using class information. By Eun-kyung Lee.
- clines** Calculates contour lines. By Paul Murrell.
- diptest** Compute Hartigan's dip test statistic for unimodality. By Martin Maechler, based on Fortran and S-plus from Dario Ringach (NYU.edu).
- eha** A package for survival and event history analysis. By Göran Broström.
- emme2** This package includes functions to read and write to an EMME/2 databank. By Ben Stabler.
- exactLoglinTest** Monte Carlo and MCMC goodness of fit tests for log-linear models. By Brian Caffo.
- flexmix** FlexMix implements a general framework for finite mixtures of regression models using the EM algorithm. FlexMix provides the E-step and all data handling, while the M-step can be supplied by the user to easily define new models. Existing drivers implement mixtures of standard linear models, generalized linear models and model-based clustering. By Friedrich Leisch.
- forward** Forward search approach to robust analysis in linear and generalized linear regression models. By Originally written for S-Plus by: Kjell Konis and Marco Riani. Ported to R by Luca Scrucca.
- fpc** Fuzzy and crisp fixed point cluster analysis based on Mahalanobis distance and linear regression fixed point clusters. Semi-explorative, semi-model-based clustering methods, operating on $n \times p$ data, do not need prespecification of number of clusters, produce overlapping clusters. Discriminant projections separate groups optimally, used to visualize the separation of groupings. Corresponding plot methods. Clusterwise linear regression by normal mixture modeling. By Christian Hennig.
- ftnonpar** The package contains R-functions to perform the methods in nonparametric regression and density estimation, described in Davies, P. L. and Kovac, A. (2001) Local Extremes, Runs, Strings and Multiresolution (with discussion) *Annals of Statistics*. 29. p1-65 Davies, P. L. and Kovac, A. (2003) Densities, Spectral Densities and Modality *Statistica Neerlandica* 49,185-245. By Laurie Davies and Arne Kovac.
- ggm** Functions for defining directed acyclic graphs and undirected graphs, finding induced graphs and fitting Gaussian Markov models. By Giovanni M. Marchetti.
- gridBase** Integration of base and grid graphics. By Paul Murrell.
- its** The its package contains an S4 class for handling irregular time series. By Portfolio & Risk Advisory Group, Commerzbank Securities.
- linprog** This package can be used to solve Linear Programming / Linear Optimization problems

by using the simplex algorithm. By Arne Henningsen.

lme4 Fit linear and generalized linear mixed-effects models. By Douglas Bates, and Saikat DebRoy.

lmeSplines Add smoothing spline modelling capability to nlme. Fit smoothing spline terms in Gaussian linear and nonlinear mixed-effects models. By Rod Ball.

logistf Firth's bias reduced logistic regression approach with penalized profile likelihood based confidence intervals for parameter estimates. By Meinhard Ploner, Daniela Dunkler, Harry Southworth, Georg Heinze.

mapdata Supplement to maps package, providing the larger and/or higher-resolution databases. Original S code by Richard A. Becker and Allan R. Wilks. R version by Ray Brownrigg.

maps Display of maps. Projection code and larger maps are in separate packages (mapproj and mapdata). Original S code by Richard A. Becker and Allan R. Wilks. R version by Ray Brownrigg. Enhancements by Thomas P Minka.

maptools Set of tools for manipulating and reading geographic data, in particular ESRI shapefiles. By Nicholas J. Lewin-Koh, modified by Roger Bivand; C code used from shapelib ().

merror N methods are used to measure each of n items. This data is used to estimate the accuracy and precision of the methods. Maximum likelihood estimation is used for the precision estimates. By Richard A. Bilonick.

mmlcr Mixed-mode latent class regression (also known as mixed-mode mixture model regression or mixed-mode mixture regression models) which can handle both longitudinal and one-time responses, although it is created with longitudinal data in mind. By Steve Buyske.

mvnormtest Generalization of Shapiro-Wilk test for multivariate variables. By Slawomir Jarek.

negenes Estimating the number of essential genes in a genome on the basis of data from a random transposon mutagenesis experiment, through the use of a Gibbs sampler. By Karl W Broman.

nlmeODE This package combines the odesolve and nlme packages for mixed-effects modelling using differential equations. By Christoffer W. Tornøe.

nortest Five omnibus tests for the composite hypothesis of normality. By Juergen Gross.

nprq Nonparametric and sparse quantile regression methods. By Roger Koenker and Pin Ng.

orientlib Representations, conversions and display of orientation SO(3) data. See the orientlib help topic for details. By Duncan Murdoch.

pps The pps package contains functions to select samples using PPS (probability proportional to size) sampling. It also includes a function for stratified simple random sampling, a function to compute joint inclusion probabilities for Sampford's method of PPS sampling, and a few utility functions. By Jack G. Gambino.

prabclus Distance based parametric bootstrap tests for clustering, mainly thought for presence-absence data (clustering of species distribution maps). Jaccard and Kulczynski distance measures, clustering of MDS scores, and nearest neighbor based noise detection (R port of Byers and Raftery's (1998) "NNclean"). Main functions are prabtest (for testing), prabclust (for clustering), prabinit (for preparing the data) and NNclean (for noise detection). The help-pages for prabtest and prabclust contain simple standard executions. By Christian Hennig.

psy Kappa, ICC, Cronbach alpha, screeplot, PCA and related methods. By Bruno Falissard.

rqmcm2 Markov Chain Marginal Bootstrap for Quantile Regression. A resampling method for inference in quantile regression. Suitable for modest to large data sets. By Maria Kochergin-sky, Xuming He.

sca Simple Component Analysis often provides much more interpretable components than Principal Components (PCA) without losing too much. By Valentin Rousson and Martin Maechler.

seacarb Calculates parameters of the seawater carbonate system. By Aurelien Proye and Jean-Pierre Gattuso.

seao Software for simple evolutionary algorithms. For all factors (genes) included, one can set the lowest and highest values as well as the number of levels (alleles) or the step. An initial generation can be calculated in several ways and following generations are calculated based on a parent generation which can be constructed using other, already calculated generations or new generations (as long as the format is ok). By Kurt Sys.

seao.gui Graphical interface for seao-package. All functions can be called separately, but there's also a function which can call all other functions. The functions called with this graphical

interface hasn't the same flexibility of the functions called from the command-line. This may change in the future, although I doubt that...
By Kurt Sys.

segmented Functions to estimate break-points of segmented relationships in regression models (GLMs). By Vito M. R. Muggeo.

shapefiles Functions to read and write ESRI shapefiles. By Ben Stabler.

shapes Routines for the statistical analysis of shapes. In particular, the package provides routines for procrustes analysis, displaying shapes and principal components, testing for mean shape difference, thin-plate spline transformation grids and edge superimposition methods. By Ian Dryden.

simpleboot Simple bootstrap routines. By Roger D. Peng.

smoothSurv This package contains primarily a function to fit a regression model with possibly right, left or interval censored observations and with the error distribution expressed as a mixture of G-splines. Core part of the computation is done in compiled C++ written using the Scythe Statistical Library Version 0.3. By Arnost Komarek.

tapiR Tools for accessing online UK House of Commons voting data, and datasets for the parliaments 1992-97, 1997-2001 and 2001-now. By David Firth and Arthur Spirling.

udunits This package provides an R interface to the Unidata udunits library routines, which

can convert quantities between various units. Units are indicated by human-readable strings, such as "m/s", "J", "kg", or "in". Routines for converting any quantity in known units to other compatible units are provided. Of particular use are the time and calendar conversion routines. Calendar dates are given with units such as "days since 1900-01-01", for example. Values with this unit can be converted to normal, readable calendar dates. This will let you find that "32018 days since 1900-01-01" is actually 31 Aug 1987. These routines follow the library's C interface, so consult that section of Unidata's udunits manual for reference. Here are some example formatted units strings that can be used: "10 kilogram.meters/seconds2", "10 kg-m/sec2", "(PI radian)2", "degF", "degC", "100rpm", "geopotential meters", "33 feet water". Note that the udunits library must already be installed on your machine for this package to work. By David Pierce.

Other changes

- Package **grid** is a base package in R 1.8.0.
- Package **GeneSOM** was renamed to **som**.

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