

CRAN Task Views

Bayesian	Bayesian Inference
ChemPhys	Chemometrics and Computational Physics
ClinicalTrials	Clinical Trial Design, Monitoring, and Analysis
Cluster	Cluster Analysis & Finite Mixture Models
DifferentialEquations	Differential Equations
Distributions	Probability Distributions
Econometrics	Computational Econometrics
Environmetrics	Analysis of Ecological and Environmental Data
ExperimentalDesign	Design of Experiments (DoE) & Analysis of Experimental Data
Finance	Empirical Finance
Genetics	Statistical Genetics
Graphics	Graphic Displays & Dynamic Graphics & Graphic Devices & Visualization
HighPerformanceComputing	High-Performance and Parallel Computing with R
MachineLearning	Machine Learning & Statistical Learning
MedicalImaging	Medical Image Analysis
MetaAnalysis	Meta-Analysis
Multivariate	Multivariate Statistics

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CRAN Task View: Probability Distributions

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Version: 2013-04-22

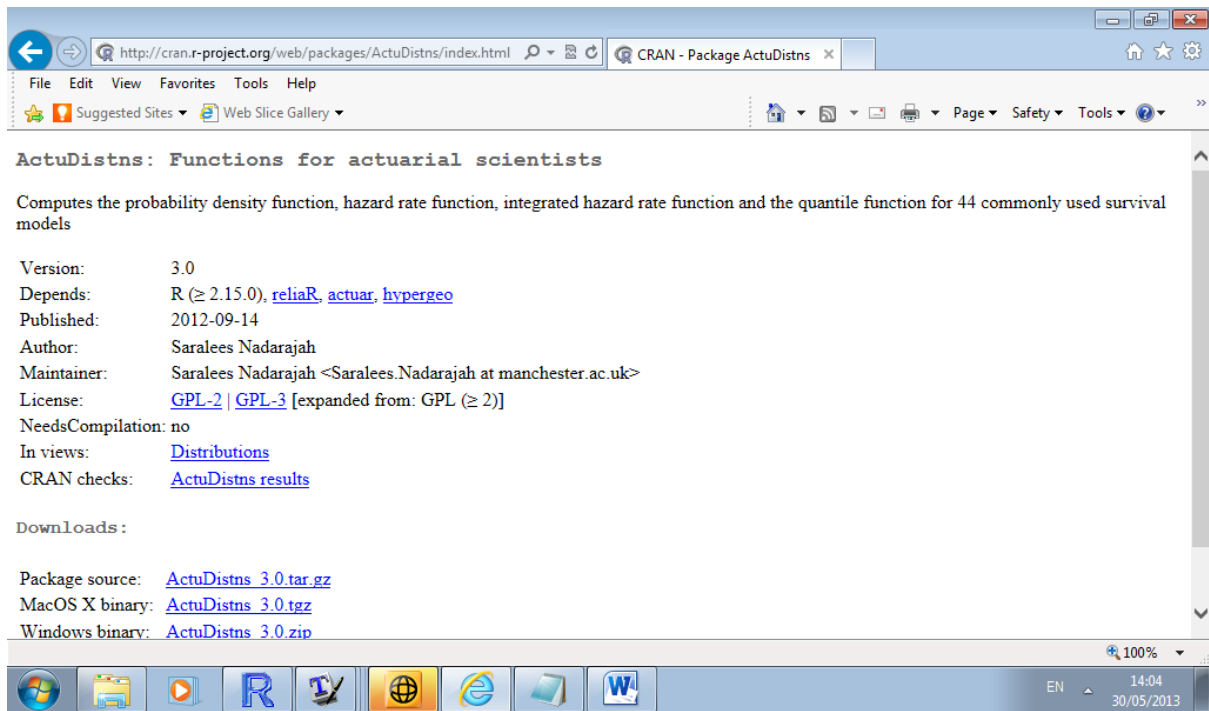
For most of the classical distributions, base R provides probability distribution functions (p), density functions (d), quantile functions (q), and random number generation (r). Beyond this basic functionality, many CRAN packages provide additional useful distributions. In particular, multivariate distributions as well as copulas are available in contributed packages. Ultimate bibles on probability distributions are

- different volumes of N. L. Johnson, S. Kotz and N. Balakrishnan books, e.g. Continuous Univariate Distributions, Vol. 1,
- Thesaurus of univariate discrete probability distributions by G. Wimmer and G. Altmann.
- Statistical Distributions by M. Evans, N. Hastings, B. Peacock.
- Distributional Analysis with L-moment Statistics using the R Environment for Statistical Computing, Asquith (2011).

The maintainer greatly acknowledged Achim Zeileis, David Luethi, Tobias Verbeke, Robin Hankin, Mathias Kohl, G. Jay Kerns, Kjetil Halvorsen, William Asquith for their useful comments/suggestions. If you think information is not accurate or not complete, please let me know.

Base functionality:

- Base R provides probability distribution functions `p.foo()`, density functions `d.foo()`, quantile functions `q.foo()`, and random number generation `r.foo()` where `foo` indicates the type of distribution: beta (`foo = beta`), binomial `binom`, Cauchy `cauchy`, chi-squared `chisq`, exponential `exp`, Fisher `F`, gamma `gamma`, geometric `geom`, hypergeometric `hyper`, logistic `logis`, lognormal `lnorm`, negative binomial `nbinom`, normal `norm`, Poisson `pois`, Student's `t`, uniform `uni`, Weibull `weibull`. Following the same naming scheme, but somewhat less standard are the following distributions:



http://cran.r-project.org/web/packages/evir/index.html

CRAN - Package evir

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evir: Extreme Values in R

Functions for extreme value theory, which may be divided into the following groups; exploratory data analysis, block maxima, peaks over thresholds (univariate and bivariate), point processes, gev/gpd distributions.

Version: 1.7-3
Depends: stats
Published: 2012-07-26
Author: Bernhard Pfaff [aut, cre], Alexander McNeil [aut] (S original (EVIS)), Alec Stephenson [trl] (R port of EVIS)
Maintainer: Bernhard Pfaff <bernhard at pfaffikus.de>
License: [GPL-2](#) | [GPL-3](#) [expanded from: GPL (≥ 2)]
NeedsCompilation: no
In views: [Distributions](#), [Environmetrics](#), [Finance](#)
CRAN checks: [evir results](#)

Downloads:

Package source: [evir 1.7-3.tar.gz](#)
MacOS X binary: [evir 1.7-3.tgz](#)
Windows binary: [evir 1.7-3.zip](#)

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