

List of statistical packages

Statistical software are specialized computer programs for analysis in statistics and econometrics.

Contents

Open-source

Public domain

Freeware

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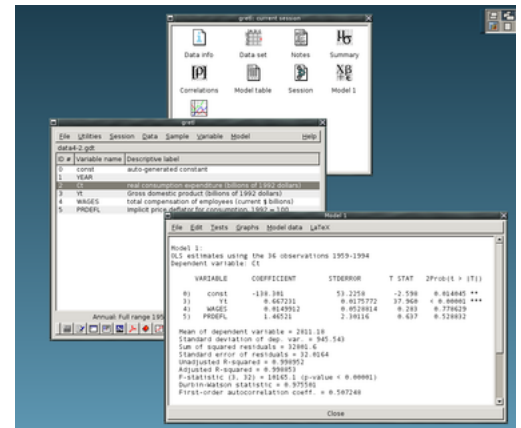
See also

References

External links

Open-source

- ADaMSoft** – a generalized statistical software with data mining algorithms and methods for data management
- ADMB** – a software suite for non-linear statistical modeling based on C++ which uses automatic differentiation
- Bayesian Filtering Library**
- Chronux** – for neurobiological time series data
- DAP** – free replacement for SAS
- Environment for DeveLoping KDD-Applications Supported by Index-Structures (ELKI)** a software framework for developing data mining algorithms in Java
- Fityk** – nonlinear regression software (GUI and command line)
- GNU Octave** – programming language very similar to MATLAB with statistical features
- gretl** – gnu regression, econometrics and time-series library
- intrinsic Noise Analyzer (iNA)** – For analyzing intrinsic fluctuations in biochemical systems
- JASP** – A free software alternative to IBM SPSS Statistics with additional option for Bayesian methods
- Just another Gibbs sampler (JAGS)** – a program for analyzing Bayesian hierarchical models using Markov chain Monte Carlo developed by Martyn Plummer. It is similar to WinBUGS
- JMulTi** – For econometric analysis, specialised in univariate and multivariate time series analysis
- KNIME** - An open source analytics platform built with Java and Eclipse using modular data pipeline workflows
- LIBSVM** – C++ support vector machine libraries
- mlpack** – open-source library for machine learning, exploits C++ language features to provide maximum performance and flexibility while providing a simple and consistent application programming interface (API)
- Mondrian** – data analysis tool using interactive statistical graphics with a link to R
- Neurophysiological Biomarker Toolbox** – Matlab toolbox for data-mining of neurophysiological biomarkers
- OpenBUGS**



gretl is an example of an open-source statistical package

- [OpenEpi](#) – A web-based, open-source, operating-independent series of programs for use in epidemiology and statistics based on JavaScript and HTML
- [OpenNN](#) – A software library written in the programming language [C++](#) which implements [neural networks](#), a main area of deep learning research
- [OpenMx](#) – A package for [structural equation modeling](#) running in [R \(programming language\)](#)
- [Orange](#), a data mining, machine learning, and bioinformatics software
- [Pandas](#) – [High-performance computing](#) (HPC) data structures and data analysis tools for [Python](#) in Python and [Cython](#) ([statsmodels](#), [scikit-learn](#))
- [Perl Data Language](#) – Scientific computing with Perl
- [Ploticus](#) – software for generating a variety of graphs from raw data
- [PSPP](#) – A free software alternative to IBM [SPSS Statistics](#)
- [R](#) – free implementation of the [S \(programming language\)](#)
 - [Programming with Big Data in R](#) ([pbdR](#)) – a series of R packages enhanced by [SPMD](#) parallelism for [big data analysis](#)
 - [R Commander](#) – GUI interface for R
 - [Rattle GUI](#) – GUI interface for R
 - [Revolution Analytics](#) – production-grade software for the enterprise big data analytics
 - [RStudio](#) – GUI interface and development environment for R
- [ROOT](#) – an open-source C++ system for data storage, processing and analysis, developed by CERN and used to find the Higgs boson
- [Salstat](#) – menu-driven statistics software
- [Scilab](#) – uses GPL-compatible [CeCILL](#) license
- [SciPy](#) – Python library for scientific computing that contains the *stats* sub-package which is partly based on the venerable [|STAT](#) (a.k.a. *PipeStat*, formerly [UNIX|STAT](#)) software
 - [scikit-learn](#) – extends SciPy with a host of machine learning models (classification, clustering, regression, etc.)
 - [statsmodels](#) – extends SciPy with statistical models and tests (regression, plotting, example datasets, [generalized linear model](#) (GLM), time series analysis, [autoregressive–moving-average model](#) (ARMA), [vector autoregression](#) (VAR), [non-parametric statistics](#), [ANOVA](#), [empirical likelihood](#))
- [Shogun \(toolbox\)](#) – open-source, large-scale machine learning toolbox that provides several SVM (Support Vector Machine) implementations (like [libSVM](#), [SVMlight](#)) under a common framework and interfaces to Octave, MATLAB, Python, R
- [Simfit](#) – simulation, curve fitting, statistics, and plotting
- [SOCR](#)
- [SOFA Statistics](#) – desktop GUI program focused on ease of use, learn as you go, and beautiful output
- [Stan \(software\)](#) – open-source package for obtaining Bayesian inference using the No-U-Turn sampler, a variant of Hamiltonian Monte Carlo. It is somewhat like BUGS, but with a different language for expressing models and a different sampler for sampling from their posteriors
- [Statistical Lab](#) – [R](#)-based and focusing on educational purposes
- [Torch \(machine learning\)](#) – a deep learning software library written in [Lua \(programming language\)](#)
- [Weka \(machine learning\)](#) – a suite of machine learning software written at the [University of Waikato](#)

Public domain

- [CSPro](#)
- [Epi Info](#)
- [X-12-ARIMA](#)

Freeware

- [BV4.1](#)
- [GeoDA](#)
- [MaxStat Lite](#) – general statistical software

- [MINUIT](#)
- [WinBUGS](#) – Bayesian analysis using Markov chain Monte Carlo methods
- [Winpepi](#) – package of statistical programs for epidemiologists

Proprietary

- [Alteryx](#) - analytics platform with drag and drop statistical models; R and Python integration
- [Analytica](#) – visual analytics and statistics package
- [Angoss](#) – products KnowledgeSEEKER and KnowledgeSTUDIO incorporate several data mining algorithms
- [ASReml](#) – for restricted maximum likelihood analyses
- [BMDP](#) – general statistics package
- [DB Lytix](#) – 800+ in-database models
- [EViews](#) – for econometric analysis
- [FAME \(database\)](#) – a system for managing time-series databases
- [GAUSS](#) – programming language for statistics
- [Genedata](#) – software solution for integration and interpretation of experimental data in the life science R&D
- [GenStat](#) – general statistics package
- [GLIM](#) – early package for fitting generalized linear models
- [GraphPad InStat](#) – very simple with lots of guidance and explanations
- [GraphPad Prism](#) – biostatistics and nonlinear regression with clear explanations
- [IMSL Numerical Libraries](#) – software library with statistical algorithms
- [JMP](#) – visual analysis and statistics package
- [Lertap 5](#) (<http://www.lertap.com>)- an Excel application used to analyze responses to tests and surveys (free for students)
- [LIMDEP](#) – comprehensive statistics and econometrics package
- [LISREL](#) – statistics package used in structural equation modeling
- [Maple](#) – programming language with statistical features
- [Mathematica](#) – a software package with statistical particularly features
- [MATLAB](#) – programming language with statistical features
- [MaxStat Pro](#) – general statistical software
- [MedCalc](#) – for biomedical sciences
- [Microfit](#) – econometrics package, time series
- [Minitab](#) – general statistics package
- [MLwiN](#) – multilevel models (free to UK academics)
- [NAG Numerical Library](#) – comprehensive math and statistics library
- [Neural Designer](#) – commercial deep learning package
- [NCSS](#) – general statistics package
- [NLOGIT](#) – comprehensive statistics and econometrics package
- [NMath Stats](#) – statistical package for .NET Framework
- [nQuery Sample Size Software](#) – Sample Size and Power Analysis Software^[1]
- [O-Matrix](#) – programming language
- [OriginPro](#) – statistics and graphing, programming access to NAG library
- [PASS Sample Size Software \(PASS\)](#) – power and sample size software from NCSS
- [Plotly](#) – plotting library and styling interface for analyzing data and creating browser-based graphs. Available for [R](#), [Python](#), [MATLAB](#), [Julia](#), and [Perl](#)
- [Primer-E Primer](#) – environmental and ecological specific
- [PV-WAVE](#) – programming language comprehensive data analysis and visualization with IMSL statistical package
- [Qlucore Omics Explorer](#) – interactive and visual data analysis software
- [Quantum Programming Language](#) – part of the SPSS MR product line, mostly for data validation and tabulation in Marketing and Opinion Research
- [RapidMiner](#) – machine learning toolbox

- [Regression Analysis of Time Series \(RATS\)](#) – comprehensive [econometric analysis](#) package
- [SAS \(software\)](#) – comprehensive statistical package
- [SHAZAM \(Econometrics and Statistics Software\)](#) – comprehensive econometrics and statistics package
- [Simul](#) – econometric tool for multidimensional (multi-sectoral, multi-regional) modeling
- [SigmaStat](#) – package for group analysis
- [SmartPLS](#) – statistics package used in [partial least squares path modeling](#) (PLS) and PLS-based [structural equation modeling](#)
- [SOCR](#) – online tools for teaching [statistics](#) and [probability theory](#)
- [Speakeasy \(computational environment\)](#) – numerical computational environment and programming language with many statistical and [econometric analysis](#) features
- [SPSS Modeler](#) – comprehensive data mining and text analytics workbench
- [SPSS Statistics](#) – comprehensive statistics package
- [Stata](#) – comprehensive statistics package
- [StatCrunch](#) – comprehensive statistics package
- [Statgraphics](#) – general statistics package to include cloud computing and Six Sigma for use in business development, process improvement, data visualization and statistical analysis, design of experiment, point processes, geospatial analysis, regression, and time series analysis are all included within this complete statistical package.
- [Statistica](#) – comprehensive statistics package
- [StatsDirect](#) – statistics package designed for biomedical, public health and general health science uses
- [StatXact](#) – package for exact nonparametric and parametric statistics
- [Systat](#) – general statistics package
- [SuperCROSS](#) – comprehensive statistics package with ad-hoc, cross tabulation analysis
- [S-PLUS](#) – general statistics package
- [Unistat](#) – general statistics package that can also work as Excel add-in
- [The Unscrambler](#) – free-to-try commercial multivariate analysis software for Windows
- [WarpPLS](#) – statistics package used in [structural equation modeling](#)
- [Wolfram Language](#)^[2] – the computer language that evolved from the program [Mathematica](#). It has similar statistical capabilities as Mathematica.
- [World Programming System \(WPS\)](#) – statistical package that supports the use of [Python](#), [R](#) and [SAS](#) languages within in a single user program.
- [XploRe](#)

Add-ons

- [Analyse-it](#) – add-on to [Microsoft Excel](#) for statistical analysis
- [NumXL](#) – add-on to [Microsoft Excel](#) for statistical and time series analysis
- [SigmaXL](#) – add-on to [Microsoft Excel](#) for statistical and graphical analysis
- [SPC XL](#) – add-on to [Microsoft Excel](#) for general statistics
- [Statgraphics Sigma Express](#) – add-on to [Microsoft Excel](#) for [Six Sigma](#) statistical analysis
- [SUDAAN](#) – add-on to [SAS](#) and [SPSS](#) for statistical surveys
- [XLfit](#) add-on to [Microsoft Excel](#) for curve fitting and statistical analysis

See also

- [Comparison of statistical packages](#)
- [Econometric software](#)
- [Free statistical software](#)
- [List of computer algebra systems](#)
- [List of graphing software](#)
- [List of numerical analysis software](#)
- [List of numerical libraries](#)
- [Mathematical software](#)

- Psychometric software

References

1. Hickey, Graeme L.; Grant, Stuart W.; Dunning, Joel; Siepe, Matthias (2018). "Statistical primer: Sample size and power calculations—why, when and how?†" (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6005113>). *European Journal of Cardio-Thoracic Surgery*. **54**: 4–9. doi:10.1093/ejcts/ezy169 (<https://doi.org/10.1093%2Fejcts%2Fezy169>). PMC 6005113 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6005113>).
2. Wolfram Language Guide: Statistical Data Analysis (<https://reference.wolfram.com/language/guide/Statistics.html>)

External links

- Statistics software (<https://curlie.org/Science/Math/Statistics/Software>) at Curlie
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