
Freely Available Statistical Software On Internet

G Singh

Citation

G Singh. *Freely Available Statistical Software On Internet*. The Internet Journal of Medical Simulation. 2008 Volume 2 Number 2.

Abstract

Many researchers of biomedical or other areas and even statisticians who do not like to purchase popular statistical software and use to work on copied version, may download this free software according to their requirement and perform statistical analysis of data.

Following is the list of free statistical packages, the link/website of which can be found using any search engine and can be downloaded from Internet.

Now a days a large number of statistical packages for general purpose and specific purpose are available on internet free of cost and copyright restrictions that can be downloaded and can work offline. However, commercial use of these packages like mixing, editing and publishing without the permission of author is restricted. The only requirement is to quote them properly whenever used.

Basically there are two kinds of free statistical software available on internet. One, which works online (like <http://www.health-calc.com> works online as calculator calculating BMI, PI etc. on entering the value of height and weight etc.) and other which works offline (non-internet) for stand-alone computing.

Many researchers of biomedical or other areas and even statisticians who do not like to purchase popular statistical software and use to work on copied version, may download these free software according to their requirement and perform statistical analysis of data.

Following is the list of free statistical packages, the link/website of which can be found using any search engine and can be downloaded from Internet.

OpenStat -- a general stats package for Win 95/98/NT, developed by Bill Miller of Iowa State U, with a very broad range of data manipulation and analysis capabilities and an SPSS-like user interface.

NCSS 6.0 Junior -- a free, stripped-down version of NCSS 6.0 for Win 3.1. Has data entry, descriptive statistics, t-tests,

multiple regression, tests on proportions, cross tabs, one-way ANOVA, exponential smoothing, histograms, scatter plots, and box plots.

EasyStat -- Simple program for Windows and Mac for t-tests, F-tests, simple ANOVA, contingency table, Mantel-Haenszel

Regress+ -- A professional package (Macintosh only) for univariate mathematical modeling (equations and distributions).

Scilab -- a scientific software package for numerical computations in a user-friendly environment. Available for Windows, Mac and Unix computers.

SISA -- Simple Interactive Statistical Analysis for PC (DOS) from Daan Uitenbroek.

Statistical Software by Paul W. Mielke Jr. -- a large collection of executable DOS programs (and Fortran source).

IRRISTAT -- for data management and basic statistical analysis of experimental data (Windows). Primarily for analysis of agricultural field trials, but many features can be used for analysis of data from other sources.

ViSta -- a Visual Statistics program for Win3.1, Win 95/NT, Mac and Unix, featuring a Structured Desktop, with features designed to structure and assist the statistical analyst.

Dap -- a statistics and graphics package developed by Susan Bassein for Unix and Linux systems, with commonly-

needed data management, analysis, and graphics (univariate statistics, correlations and regression, ANOVA, categorical data analysis, logistic regression, and nonparametric analyses).

PAST -- an easy-to-use data analysis package aimed at paleontology including a large selection of common statistical, plotting and modelling functions.

AM -- a free package for analyzing data from complex samples, especially large-scale assessments, as well as non-assessment survey data.

Instat Plus -- from the University of Reading, in the UK. (Not to be confused with Instat from GraphPad Software.) An interactive statistics package for Windows or DOS.

SSP (Smith's Statistical Package) -- a simple, user-friendly package for Mac and Windows that can enter/edit/transform/import/export data, calculate basic summaries, prepare charts, evaluate distribution function probabilities, perform simulations, compare means & proportions, do ANOVA's, Chi Square tests, simple & multiple regressions.

Dataplot -- (Unix, Linux, PC-DOS, Windows) for scientific visualization, statistical analysis, and non-linear modeling.

WebStat -- A Java-based statistical computing environment for the World Wide Web. Needs a browser, but can be downloaded and run offline.

PS -- a well-implemented Windows 95/NT program for power and sample size calculations from Vanderbilt Univ Med Ctr.

StatCalc -- a PC calculator that computes table values and other statistics for 34 probability distributions. Also includes some nonparametric table values, tolerance factors, and bivariate normal distribution.

MorePower -- another well-implemented power/sample-size calculator for any ANOVA design, for 1- and 2-sample t-tests, and for 1- and 2-sample binomial testing (sign test, chi-square test).

EasySample -- a tool for statistical sampling. Supports several types of attribute and variable sampling and includes a random number generator and standard deviation calculator. Has a consistent, easy-to-use interface.

EpiData -- a comprehensive yet simple tool for documented

data entry. Overall frequency tables (codebook) and listing of data included, but no statistical analysis tools.

Calculate sample size required for a given confidence interval, or confidence interval for a given sample size. Can handle finite populations. Online calculator also available.

ROC Curves -- a set of downloadable programs and Excel spreadsheets to calculate and graph various kinds of ROC (Receiver Operator Characteristic) curves.

DQO-PRO -- a sample-size calculator for MS Windows that performs three types of calculations:

- determining the rate at which an event occurs (confidence levels versus numbers of false positive or negative conclusions),
- determining an estimate of an average within a tolerable error (given the standard deviation of individual measurements), and
- determining the sampling grid necessary to detect "hot spots" of various assumed shapes.

Probability Calculator -- Regular (p-value) and inverse calculation for most popular central and non-central probability distributions: Beta, Binomial, Bivariate Normal, Chi Square, Correlation, Fisher F, Gamma, Hypergeometric, Negative Binomial, Normal (Gaussian), Poisson, Student t, Studentized Range, Weibull.

Binomial Probability Program (BPP) is a menu driven program which performs a variety of functions related to the success/ failure situation. Given the probability of occurrence for a specific event, this program calculates the probability that EXACTLY, NO MORE THAN, or AT LEAST a certain number of events occur in a given number of trials for all possible outcomes, and will generate plots for each of these.

ADE-4 -- multivariate analysis and graphical display software package for Mac and Win 95/NT.

G*Power -- a general Power Analysis program for DOS and Macintosh. Performs high-precision analysis for t-tests, F-tests, Chi-square tests. Computes power, sample sizes, alpha, beta, and alpha/beta ratios.

Tests of Proportions- applies tests of significance for proportions (between observed vs expected and between two independent proportions).

MacKappa -- calculates general and partial kappa coefficients for nominal data. (Mac, 220k)

BUGS -- Bayesian inference Using Gibbs Sampling. Software for the Bayesian analysis of complex statistical models using Markov chain Monte Carlo (MCMC) methods.

AMELIA -- A program for substituting reasonable values for missing data (called "imputation")

SPSS Syntax Files -- a large collection of SPSS routines for randomized study design, sampling strategies, meta-analysis, sample size for confidence intervals, correlation tests, psychometry and other areas.

EasyReg (Easy Regression Analysis), by Herman J. Bierens. Incredibly powerful and multi-featured program for data manipulation and analysis. Designed for econometrics, but useful in many other disciplines as well.

mle - Maximum Likelihood Estimation -- a simple programming language for building and estimating parameters of likelihood models

WinSAAM -- Windows implementation of SAAM (System Analysis and Modeling Software).

Boomer -- Non-linear Regression Program for Analysis of Pharmacokinetic and Pharmacodynamic Data.

STPLAN -- Performs power, sample size, and related calculations needed to plan studies. Covers a wide variety of situations, including studies whose outcomes involve the Binomial, Poisson, Normal, and log-normal distributions, or are survival times or correlation coefficients. Available for MS-DOS and Mac; also as Fortran and C source code.

Epi Info -- a completely re-designed and modernized Windows version of the famous Epi Info for DOS, from the Center for Disease Control.

PEPI -- a collection of 43 small DOS / Windows programs that perform a large assortment of statistical tests. They can be downloaded individually, or as a single ZIP file.

Free Public Health & Epidemiology Software -- written by Mark Myatt)and others:

- WINPEPI (PEPI for Windows) -- Windows versions of the renowned PEPI suite of programs
- EpiCalc 2000 -- Statistical calculator
- FP Advisor -- Foodborne disease database

- SigmaD -- Standardisation of measurement
- SOUNDEX Calculators -- Confidentiality of data / identification of duplicate records
- SampleXS -- Sample size calculator for cross-sectional surveys
- SampleLQ -- Sample size calculator for LQAS surveys
- SampleRate -- Sample size calculator for a single rate
- EpiGram -- Simple diagramming software
- Statistical Utilities -- Miscellaneous statistical and epidemiological utilities (by Ray Simons and others)
- EpiInfo PLUS -- A version of the classic DOS version of EpiInfo
- EpiInfo Add-ins -- Logistic regression and survival analysis for EpiInfo .REC files
- MUAC screening tool -- Software to determine MUAC cut-points for two-stage screening in nutritional emergencies.
- CSAS coverage calculator -- An Excel spreadsheet for calculating coverage estimates and drawing plots and maps from CSAS survey data. Also provides capture-recapture estimates of the sensitivity of a case-finding procedure. A spreadsheet containing example data is available [here](#).
- A brief introduction to using the R environment for analysing epidemiological data in Adobe Acrobat (.PDF) format with sample data, in a ZIP file [here](#).

Meta-analysis 5.3 -- Free DOS statistics software for meta-analysis. Probably still the most frequently used meta-analysis software in the world. Can select the analysis of exact p values or effect sizes (d or r, with a cluster size option). Can plot a stem-and-leaf display of correlation coefficients. A utility menu is provided that allows various transformations and preliminary computations that are typically required before the final meta-analysis can be performed.

EasyMA -- a free user-friendly MS-DOS program for the

meta-analysis of clinical trials results.

EPIMETA (from CDC) -- a DOS-based meta-analysis program that features a Windows-like interface which makes data entry, file manipulation, and subgroup analysis easy.

Life Table -- available in Lotus and Excel formats.

Diagnostic Statistics -- calculates diagnostic efficiency statistics (i. e., sensitivity, specificity, positive and negative predictive power, Kappa, etc.).

ABSRISK -- a program (MS-DOS) for estimating absolute risks from relative risks.

First Bayes -- a free, easy-to-use Windows application for elementary Bayesian Statistics.

MANET -- ("Missings Are Now Equally Treated")

Macintosh software for interactive graphics tools for data sets with missing values.

GrafProg -- a Windows graphing program design, copy and save graphs generated by functions or by spreadsheet; also includes some statistical graphing processes.

The above list is not exhaustive. There can be much more free software available on Internet for statistical analysis of data related to diverse field of research.

CORRESPONDENCE TO

6, Ganga Bagh Colony, Lanka Varanasi – 221005 India
Phone: 91-542-2367304 e-mail: drgirishsingh@yahoo.com

References

Author Information

Girish Singh, Ph.D.Stat.

Biostatistics Unit, Department of Basic Principles, Institute of Medical Sciences, Banaras Hindu University