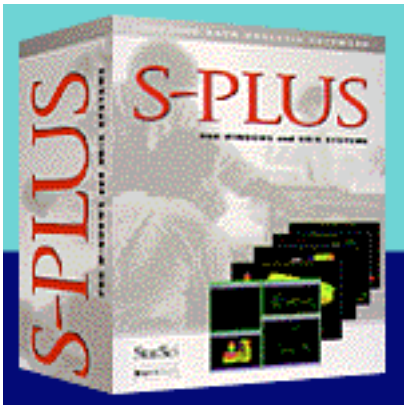
S-PLUS



Platform: Windows
Available for ground shipment

Call S-PLUS Sales at 1-800-569-0123 for pricing.

This advanced data-analysis software delivers control, clarity and confidence to your data analysis. Its object-oriented environment provides concrete benefits that traditional, procedural language analysis programs simply can't match. Every data set, function, or analysis model is treated as an object, which makes it easy to examine and explore data, run functions one step at a time, and visually compare models for fit. S-PLUS employs an interactive analysis process, giving you immediate feedback at every stage of analysis. And because you can visually explore and analyze data or data subsets, S-PLUS helps you develop a complete understanding of our your data.

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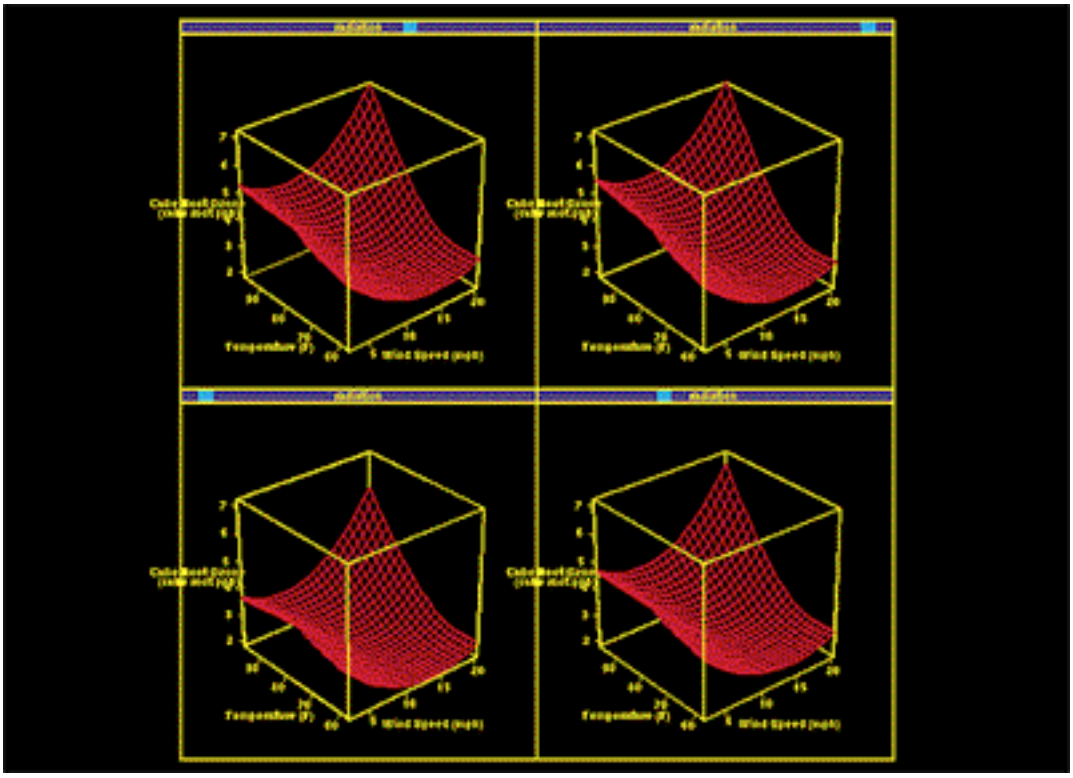
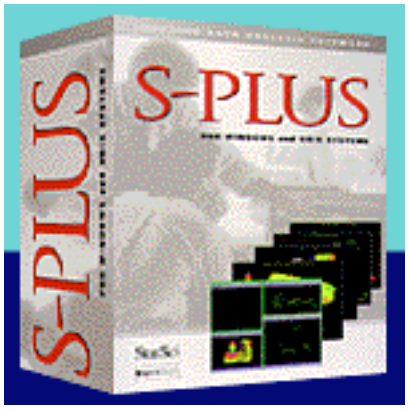


Trellis graphics is a powerful new paradigm for understanding relationships in multi-dimensional data. This technique goes far beyond conventional display techniques to create insight and understanding of multi-dimensional data.

S-PLUS gives you the flexibility to fit alternative models using different fitting methods in a unified programming environment. It's graphics are integrated into the data analysis process, helping you understand your data quickly and evaluate which models give the best results. S-PLUS includes both classical and modern techniques, so you can quickly determine the best fitting models for your data. And all the documentation is included.

S-PLUS



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Interactive analysis, with step-by-step feedback
Built-in, true object-oriented language

S-PLUS supports object classes, inheritance, generic functions, and methods
Operators and functions work on scalars, vectors, arrays
Structured language, including for, while, next, repeat, break
Logical operators, including >, >=, <, <=, ==, !=, &, if else, all, any
Sophisticated operators for assigning, extracting, replacing parts of objects
"list" object contains structured arrays of dissimilar items
"Merge" function for intregrating data sets
"By" and "Aggregate" functions for analyzing specific variables for each of the various levels of another variable
Write your own functions for specific analyses
Modify any of the 1,650 provided functions

Interface with C and FORTRAN programs

Use as front-end for commercial libraries (IMSL, NAG, etc.)
Dynamic (run-time) and static loading of user-written C or FORTRAN programs
Dynamic loading of Dynamic Link Libraries (DLLs) in Windows

Interface with operating system

Spawn subprocesses
Access to operating system editors
Pass data to/from operating system and other applications

Input/Output

ASCII files
Input data from keyboard
Input binary files through user-written FORTRAN or C programs
Interactive data editor
PostScript and HPGL output
Support for all MS Windows printer drivers
Import/Export data frame from Excel and Lotus 1-2-3 spreadsheets in Windows
Import/Export data from dBase or any other ODBC supporting drivers in Windows

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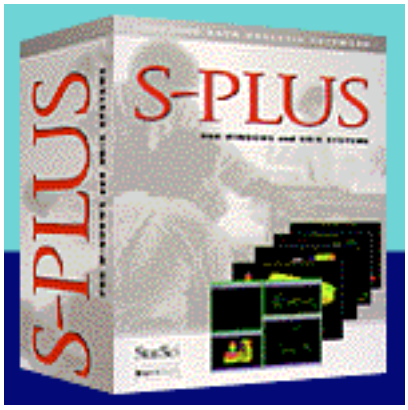

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Help and Documentation

Interactive point-and-click help system
Extensive documentation
Command line recall and editing
Telephone and e-mail Helpline

Classic and modern functions insure penetrating analysis and best fit
Basic statistics

Descriptive summary statistics
Student's t-test
Chi-square test
Wilcoxon rank sum test
Binomial test
Mantel-Haenszel test
Probability distributions

Multivariate statistics and graphics

Hierarchical clustering
k-means clustering
Model-based clustering
Tree classifiers
Log-linear contingency table analysis
Minimum spanning tree
Principal components
Factor analysis
Canonical correlation
Multi-dimensional scaling
Chernoff's faces
Star-symbol plots
Dendogram plot of cluster-tree
Scatterplot matrices

Mathematical computing

Vector and matrix operations, +, *, etc.
Eigenanalysis
Invert matrix and solve linear equations
Singular value and QR decompositions

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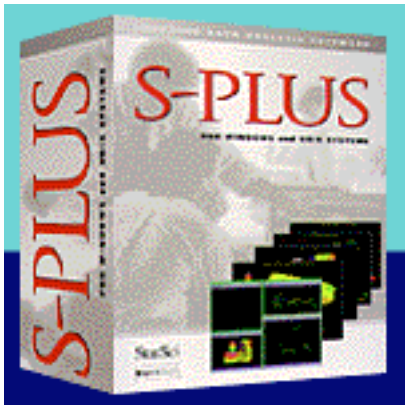

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IEEE special values supported
Interface to LAPACK for numerical linear algebra
Determinants, matrix norms, and conditional estimation
Linear equation solvers for underdetermined, square and least squares problems

Quality control charts

Shewhart charts
Cusum charts
Charts based on xbar, s, np, p, c, u

Regression and ANOVA

Linear least squares
Nonlinear least squares
Balanced and unbalanced ANOVA
Stepwise regression
Least trimmed squared residuals regression (high breakdown point robust regression)
Generalized linear models
Generalized additive models (GAM)
Residual deviance (for model comparison)
ACE and AVAS regression models
Projection pursuit regression
M-estimates of regression
Tree-based regression

Survival analysis

Kaplan-Meier and Fleming-Harrington curves
G-rho survival curve tests
Parametric survival models
Cox proportional hazards models for time dependent covariates, multiple events and discontinuous intervals of risk
Formula-based model specification
National rate tables for age and sex matching of subjects to estimate expected survivalcurves

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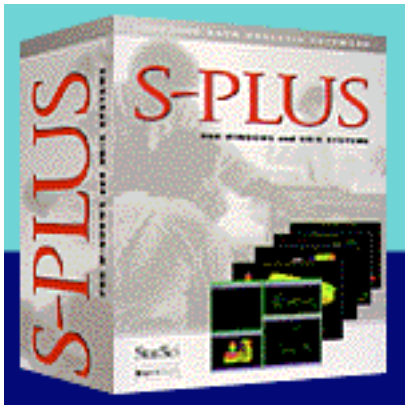

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Time series/signal analysis

Autocorrelation
Autoregression models (classical and robust)
ARIMA models
Linear filters
Complex demodulation
Spectral analysis
Fourier transformations
Smoothing: wide variety of robust and classical smoothers and filters

Integrated graphics help you determine which analysis methods to apply
Interactive graphics/Data visualization

Multiple graphics windows
Location of graphics via mouse
Point identification using mouse
User-definable color maps
Interactive color map save/load
3D data spinning
Scatterplot matrix brushing with optional marginal histogram
Condition on different levels of an underlying variable
Formula-based display specification with conditioning on factors or continuous variables
Multi-paneled displays with flexible control over axes and aspect ratios
"Banking" computations that let the data select the aspect ratio

3D plotting

Contour plot
Data spinning
Mesh surface with user-selected perspective
Image plots (pixel data representation, color or gray scale)
Scatterplot matrix brushing

2D plotting

X-Y scatterplots
Time series plots
Box plots, pie charts, histograms, bar plots, dot charts
Overlay multiple plots or display side-by-side

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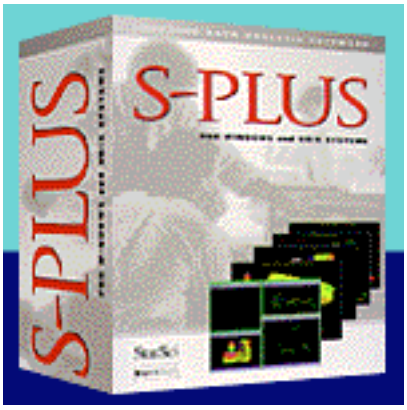

Log and linear axis scaling
Control over line style, marker type, colors, labels, tick marks, text, fill pattern
USA maps
General mapping functions

Windows GUI features

Options can be specified in a user-friendly dialog box
Object brower to interactively display filter type and select S-PLUS objects
Command history window displays all commands, which can be selected, executed, edited or saved to a file
DDE serve support allows applications to send commands to S-PLUS and receive results, e.g. Visual Basic or
Visual C++ interface applications
GUI functionality including: dialog boxes to interactively enter arguments to S-PLUS functions, customizable menus to generate S-PLUS commands, customizable dialog boxes and controls

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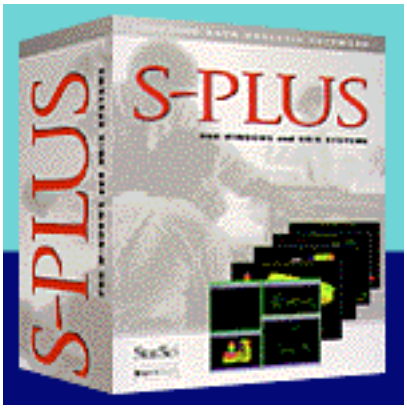

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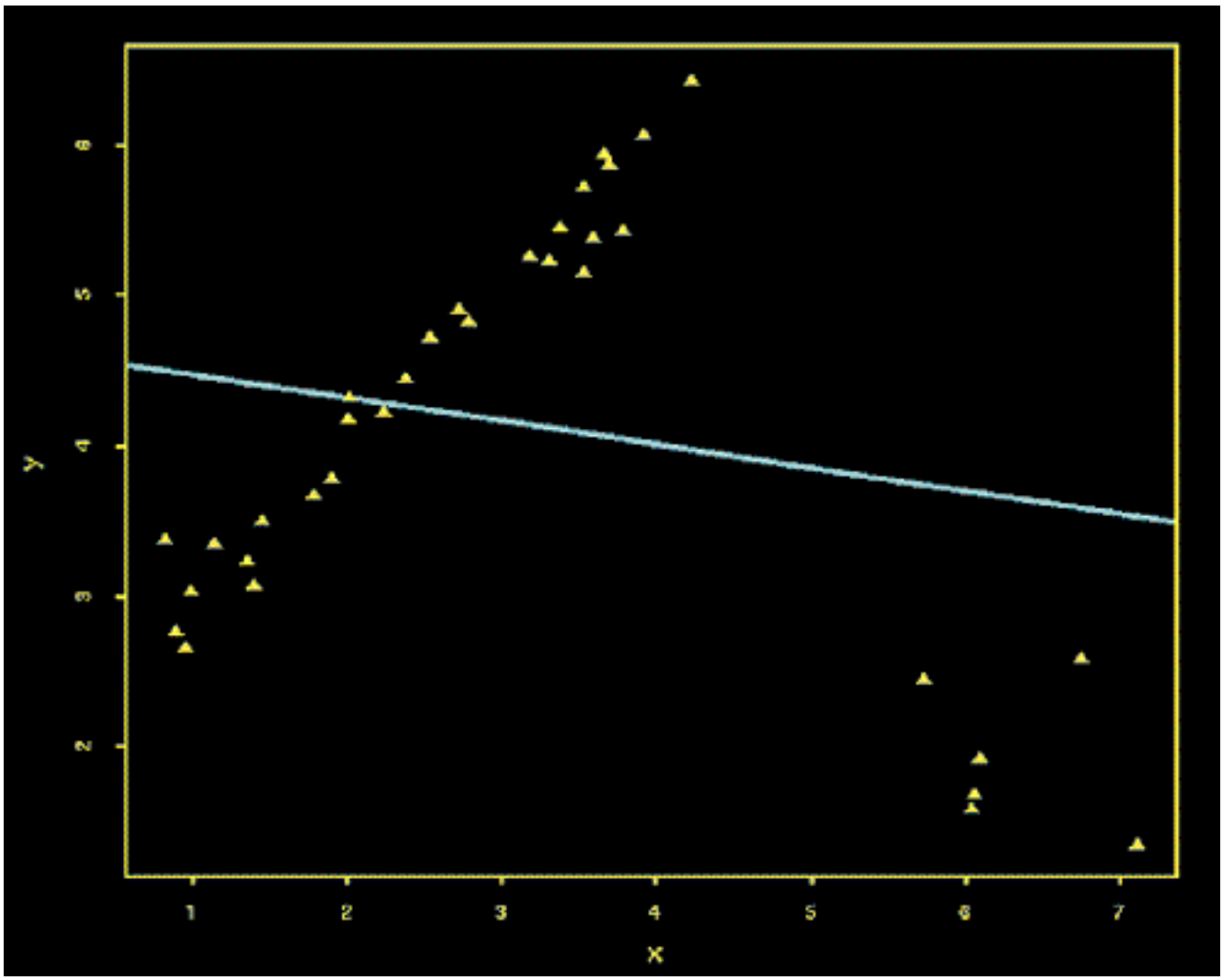
Does your software make this simple mistake?



If the answer is "yes" or "maybe," take this opportunity to find out how the robust methods in S–PLUS will make a difference in your analysis.

Any software using ordinary least squares will produce a misleading fit, such as the one shown in this simple example. The problem is even worse with two or more predictor variables, where such meaningless fits are difficult to detect graphically. The robust linear modeling methods in S-PLUS, like least trimmed squares, give a much better fit to the dominant data pattern, while revealing the outliers or unusual parts that deserve further exploration.

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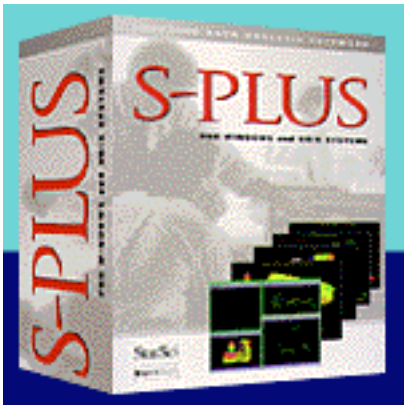

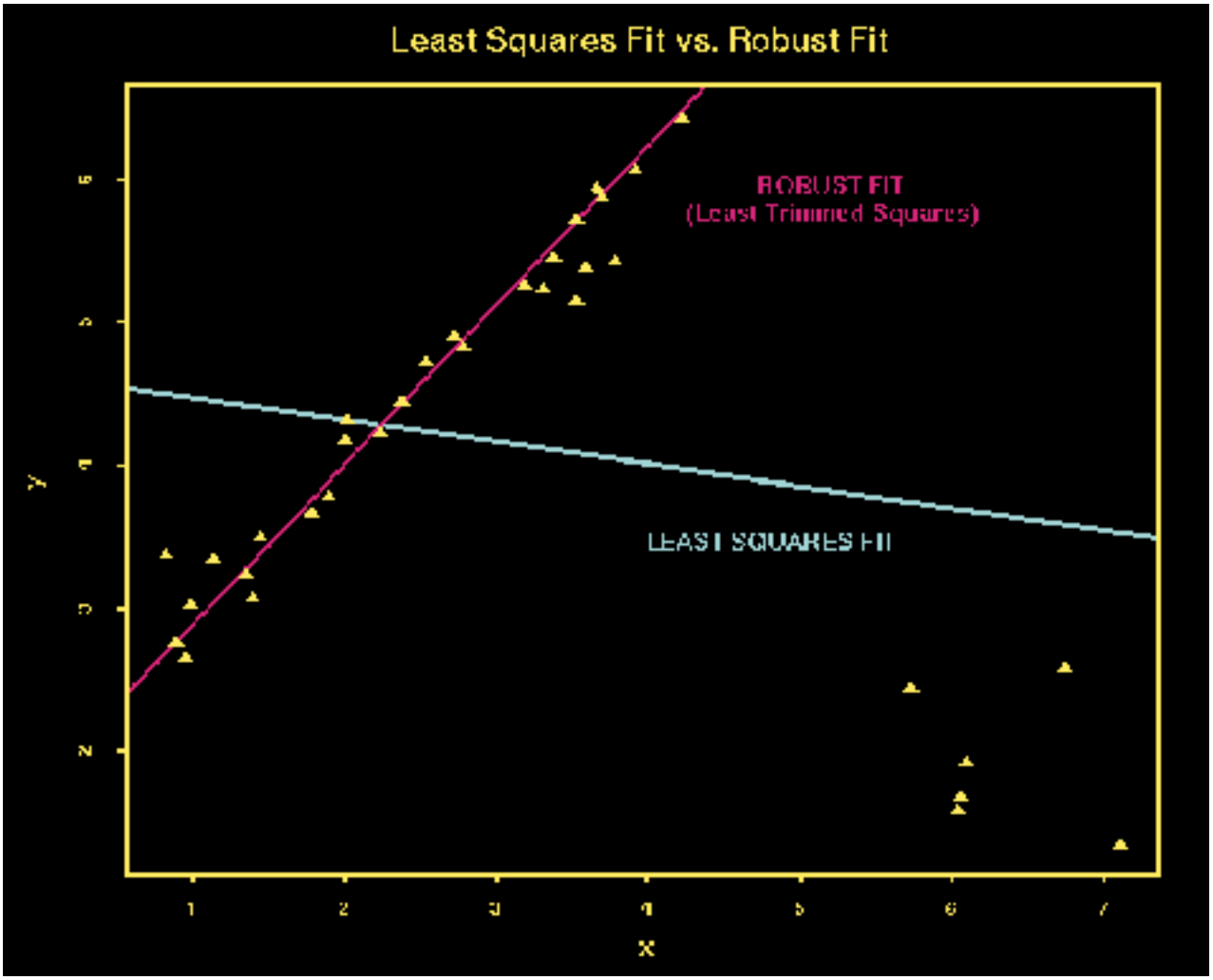

S-PLUS incorporates the S language developed at AT&T Bell Labs, the only modern, object-oriented language created specifically for data exploration and analysis. Designed by the founders of the Exploratory Data Analysis school of thought, inspired by J.W. Tukey, this interactive language environment gives you immediate feedback at every stage of your analysis. So you have complete control and confidence in your results.

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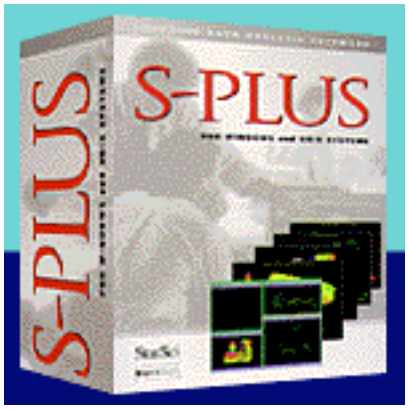

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S-PLUS is a true object-oriented language.

As a true object-oriented language, S-PLUS handles all data, functions and fitted models as objects. The inherent flexibility of S-PLUS allows you to fit alternative models using both classical and modern methods. And all your output is available for input in subsequent operations, making it easy to carry out further analysis, determine the best fitting methods, and select optimum models. S-PLUS includes over 1,650 functions for performing and managing data analysis and also allows you to modify and create functions to suit your analysis. S-PLUS provides the most comprehensive set of robust and modern methods available anywhere. These methods include: robust linear regression, robust auto regressive modeling and smoothing, robust loess curve fitting, robust covariance matrices, tree models for regression and classification, generalized additive models, projection pursuit models and adaptive curve fitting. Also, over 150 cutting edge S-PLUS functions developed by leading researchers, scientists and statisticians can be accessed electronically.

S-PLUS incorporates Trellis graphics.

S-PLUS incorporates Trellis graphics, a powerful new paradigm for understanding relationships in multi-dimensional data also developed at AT&T Bell Labs. Central to trellis displays is the notion of conditioning: displaying one variable conditional on the values of two or more variables in the form of a grid-like, multi-paneled trellis. This technique goes far beyond conventional display techniques to create insight and understanding of multi-dimensional data.

Do not get left behind.

If you are not using S-PLUS, know that your peers and competitors are. For example, leading pharmaceutical companies, investment banks, GIS research organizations, universities and government research departments rely on S-PLUS for complex analysis problems.

Find out why the world's leading researchers are depending on S-PLUS. Complete control. Penetrating insights. Thorough analysis. And quality results. When you need to be certain, you need S-PLUS.

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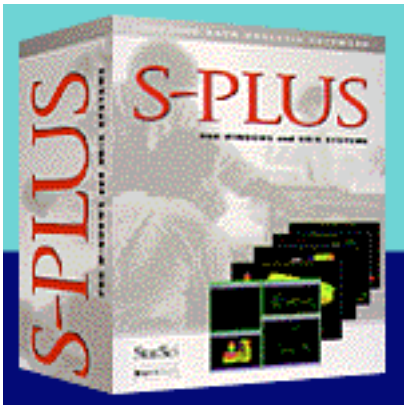

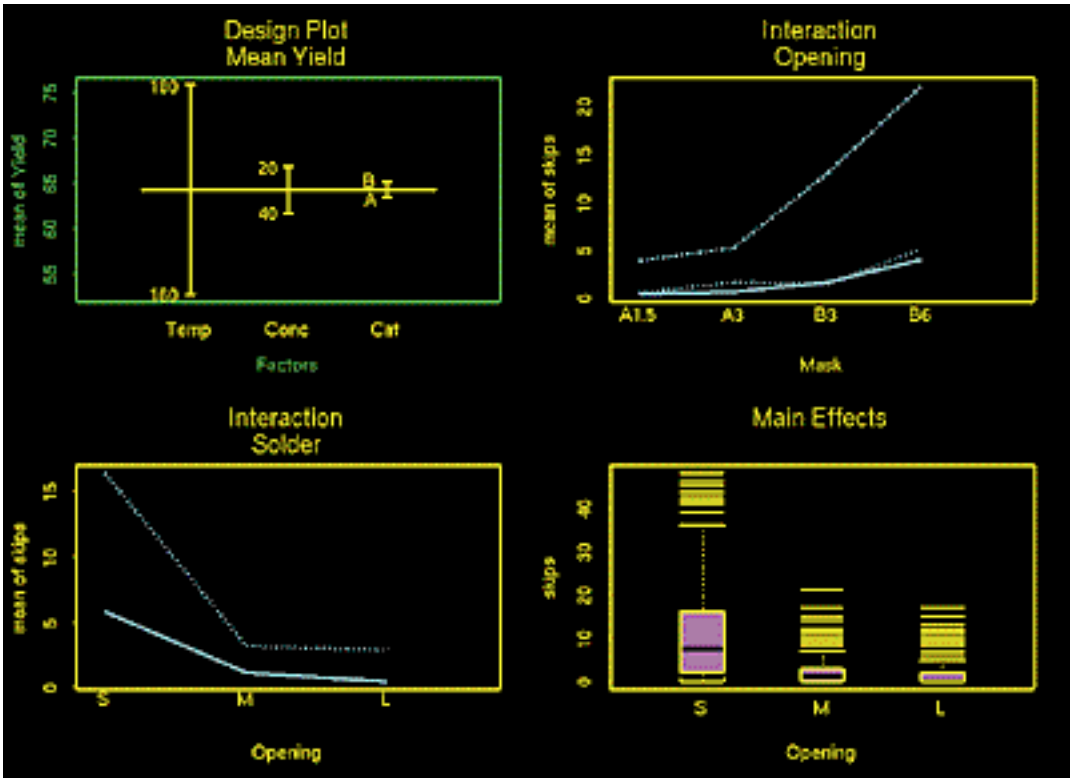

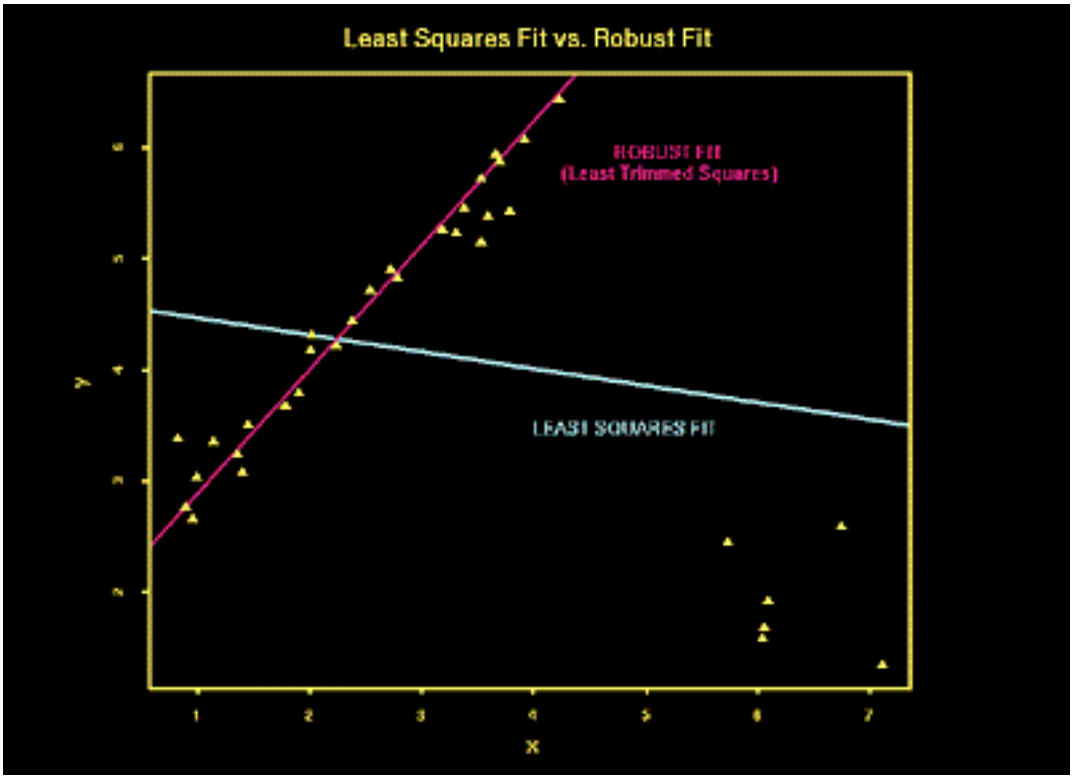

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