

# AcaStat Technical Information

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## System Requirements

### MacOS

- At least 2GB of RAM
- At least 35MB of disk space
- macOS Catalina 10.15.x
- macOS Mojave 10.14.x
- macOS High Sierra 10.13.x
- macOS Sierra 10.12.x
- OS X El Capitan 10.11.x

### Windows

- 32-bit and 64-bit versions
- At least 2GB of RAM
- At least 55MB of disk space
- Windows 10
- Windows 8.1
- Windows 7 SP1

## Data File Features

- Observations limit: tested to 1,000,000 observations with 30 variables.
- Variables limit: tested to 1,000 variables with 20,000 observations.
- Data import/export (tab/comma delimited and AcaStat system files)
- Copy and paste spreadsheet data to/from the AcaStat spreadsheet
- Format variable and value labels
- Set missing values
- Filter case selection
- Create mean centered, standardized, and logged variables
- Merge and split data files
- Set weight variable for frequencies and descriptives
- Data manipulation: recode, compute, combine, replace, trim strings
- Convert strings to values

## Help Resources

- On line Help Dashboard
- Quick app overview
- Searchable Help Topics
- Searchable Statistics Glossary
- Statistical procedure example (How To Guide)
- Statistical output interpretation (Stat Guide)
- Applied Statistics iBook (also in pdf)
- Student Workbook

## Charts Module

- Column Charts (side-by-side and stacked)
- Horizontal Bar
- Pie and Donut Charts
- Histogram
- Trend Line and Trend Forecast
- Plot XY (scattergram)
- Plot XY with Trend Line
- Box Plot Vertical
- Box Plot Horizontal (optional data table)

## Explore Statistical Procedures (spreadsheet data)

- Frequencies of numerical and string data (includes pareto chart option)
- List variables (up to 10)
- Descriptive statistics – output z-scores
- Crosstabulation – chi-square and association
- Association measures automatically determined by table characteristics
- Explore means by categorical variables
- Pearson correlation (matrix output or scattergram)
- Regression - OLS and Logistic (output residuals, predicted values)
- Independent and paired t-tests of means
- One-way ANOVA with Eta, Levene F, and Bonferroni Post Hoc
- Spearman's rho, Mann-Whitney, Kruskal -Wallis
- Biserial correlation
- Random sample selection of observations
- Random sampling simulation
- Diagnostic accuracy including ROC curve
- Real estate tax assessment analysis

## SumStats Statistical Procedures (counts, proportions, means)

- Weighted mean calculator
- Standardize (Z) Score calculator
- Confidence intervals – means and proportions
- Chi-square Goodness of Fit
- Chi-square Test of Independence (6x6 table)
- One-way ANOVA (6 means)
- Z-test of proportions – 1 and 2 sample tests
- T-test of means – 1 and 2 sample tests
- Diagnostic accuracy (2x2 table)
- Distribution probabilities – Z, T, F, Chi-square
- Decision tables
- Queuing analysis
- Constant dollars
- Price elasticity
- Epi curve
- Incidence rate
- Prevalence rate
- Mortality rate
- Case Fatality rate
- Attack rate
- Morbidity/Mortality rate direct standardization
- Absolute risk
- Relative risk (2x2 table)
- Odds ratio (2x2 table)
- Treatment cost
- Disaggregate count data for charting