Release Notes for JMP 19.1

JMP 19.1 is a general maintenance release that contains enhancements and bug fixes applicable to JMP, JMP Pro, JMP Clinical, and JMP Student Edition. Reproducible crashes and numeric issues have been corrected. Applying this maintenance release is recommended for all users.

This document contains the following content:

New Features

JMP PRO Add-Ins

- The XGBoost add-in supports a new method called LightGBM, which is a gradient boosting method.

JMP PRO Bayesian Optimization

- When you select the Create New Data Table option in the Bayesian Optimization platform, you now have the option to save only the new batch of factor combinations or to also include the training data.
- There is a new option, Save Prediction Formula, that enables you to save a new formula column for each response to the data table. Each new column contains a prediction formula for a response.
- There is a new launch window option called Include Runs that Do Not Conform to Constraints. This option specifies whether to include points that violate the linear constraints in the data table when generating or loading a candidate set.

Control Chart Builder

- The calculation of zones has been updated to account for limits that are asymmetrical. Because the Western Electric Tests depend on the zones, these tests are now available for asymmetrical limits.
- You can now save out or read in By-group identifiers in a limits table.

Fit Model (Generalized Linear Model)

- The new Prediction and Interval Formulas option in the Generalized Linear Model personality of the Fit Model platform enables you to save formula columns to the data table. These columns contain predictions, confidence limits, and prediction limits, and they can be used in the Prediction Profiler.

Fit Model (Standard Least Squares)

- The new Show CV platform preference in the Fit Least Squares platform enables you to view the CV (coefficient of variation) column by default in the REML Variance Component Estimates table.

JMP PRO Functional Data Explorer

- There are additional methods available in the Baseline Correction option in the Data Processing section of Functional Data Explorer. Previously, this option only performed parametric baseline correction using manually specified settings. Now, you can use the statistics-sensitive nonlinear iterative peak-clipping (SNIP) algorithm or the alternating reweighted least squares solution (ARWLS) algorithm to find a baseline function. There is also an option to load a baseline function from the data.

JMP Live

- A Control Chart Builder report with a Local Data Filter can be successfully published to JMP Live and can be triaged on JMP Live.
- By levels now appear prominently in the control chart warning panel.

JSL Functions

- The Polytope Uniform Random function has been renamed to Random Linearly Constrained Uniform. In addition to a new name, the function has additional options that enable you to generate random samples that are subject to cardinality constraints for specified subgroups of variables.

General Improvements

Data Tables

- JMP now enables you to save data tables directly to a SQLite database file. One JMP data table corresponds to one SQLite database file.

Graph Builder

- A new style in Graph Builder's Bar element packs overlay levels in a treemap fashion.
- Graph Builder enables you to display multiple data types on the same graph by assigning them to different Y axes, which enables you to compare variables with different units or scales.
- In Graph Builder, the Truncate format to interval option enables you to expand the format of an X-axis interval.

JMP Live

- If you have set up a connection to JMP Live, the Publish Report to JMP Public option no longer appears in the File > Publish menu. You can make it appear by selecting Always allow publishing to JMP Public from the JMP Reports preferences.

JSL Functions

- Support for JMP connections to MATLAB has been restored.

ODBC and Oracle Improvements

- Improved performance time when connecting to Oracle to get data.
- To reduce overhead when retrieving database keys, the Set ODBC Primary Key as Link ID preference is now off by default. When a data table is imported, primary keys are not queried unless you enable this preference.
- Query Builder runs faster because it no longer selects the first table when no tables are selected.
- JMP no longer closes unexpectedly when a network drops or a SQL ODBC connection is unavailable.

Samples

- The Analysis script included in the Software Data.jmp and Phone Data.jmp sample data tables has been updated to include the enhanced covering array analysis options.
- The NYC 311 Records.jmp sample data table was updated. Changes include replacing the local data filter with a global data filter, standardizing the capitalization of column names, and updating the filter view.
- In the Penguins.jmp sample data table, in the Species column, "Adelie Penguin" is changed to "Adelie penguin".
- The Tiretread Simulator Latin Hypercube n5.jmp sample data table has been added to the sample data library. This table can be used to simulate product or process optimization using Bayesian Optimization workflows.

SAS Integration

- By default, JMP is configured to show the SAS log when an error is generated. You can confirm or change this setting at File > Preferences > Third Party Data > SAS.

Statistical Improvements

JMP PRO Bayesian Optimization

- It is now required that response columns include the Response Limits column property before launching the platform. If you do not set response limits, an alert window is shown after you click OK in the launch window. You can click Add Goals in the alert window to add any missing response limits. The platform must then be relaunched.
- The save options have been updated in the Bayesian Optimization platform. The Save All Model Fits Script option is now located in the Bayesian Optimization Model Summary red triangle menu in the Model Summary tab. The Save Script for Next Iteration red triangle menu option has been removed. You can still save the start-up script by using the option in the Include Options section of the report in the Batch Selection tab.

JMP PRO Fit Model (Causal Treatment)

- In the Causal Treatment personality of the Fit Model platform, specifying a Local Data Filter at launch now adds the filter to the report, ensuring that analyses are reproduced correctly when launched or scripted.

- In the Causal Treatment personality of the Fit Model platform, Automatic Recalc now remains enabled after it is turned on, allowing analyses to update consistently when data changes occur.
- In the Fit Model launch window, the Causal Treatment personality is now unavailable when the response column has an unsupported modeling type. This prevents selection of the personality for response specifications that are not valid.
- In the Causal Treatment personality of the Fit Model platform, the Save Causal Result Columns option now saves result columns to the original data table when By groups are used.
- In the Causal Treatment personality of the Fit Model platform, Relaunch Analysis now behaves consistently with the Model Dialog and Recall options. This enables analyses to be relaunched as expected.
- The Causal Treatment personality of the Fit Model platform now shows separation warnings only when separation is present in the data. This prevents spurious warnings for models without separation.
- When the outcome is binary, the mosaic plot in the Outcome by Treatment report now reflects specified Frequency or Weight variables when they are used in the model.
- The Outcome by Treatment report now scales the vertical axis to the observed data range when all outcome values are positive, or all values are negative, instead of forcing the axis to include zero.
- JMP no longer closes unexpectedly when fitting Causal Treatment models in cases where the treatment model cannot be estimated successfully, such as perfect separation or exceeded parameter limits.
- When the Causal Treatment personality is selected and a model exceeds the parameter limit, which can result in excessive computation time, JMP now shows a warning and does not fit the model.

JMP PRO Fit Model (Mixed Model)

- For mixed models that contain a Weight variable, the degrees of freedom for prediction intervals are now correctly calculated. This applies to models in the Mixed Models and Standard Least Squares personalities of the Fit Model platform.

Fit Model (Standard Least Squares)

- The Method option now appears when you add the Random attribute to an effect in the Fit Model launch window.

Principal Components

- Performance of analyses that use Sparse SVD, such as PCA, has been improved on Windows, restoring expected run times for large or sparse data sets.

JMP PRO Structural Equation Models

- The Cross-Lagged Panel Model shortcut now includes random intercepts correctly when multiple processes are modeled, and the Add Random Intercept option is checked.
- The Measurement Invariance and Multigroup Measurement Invariance shortcuts now work correctly when using the MIIV-2SLS estimator. The strict invariance option (which is not supported with MIIV-2SLS) is no longer available.

- Fixed issues in higher-order models with the MIIV-2SLS estimator, where some equality-constrained parameters were not estimated.
- The MIIV-2SLS estimator now correctly includes manifest-variable mediators as instruments in models with latent-variable outcomes.
- The Latent Scale Set rule now validates mean-structure constraints for higher-order latent factors when using the MIIV-2SLS estimator.
- Saved scripts now correctly recognize variables when column names contain unusual spacing characters.