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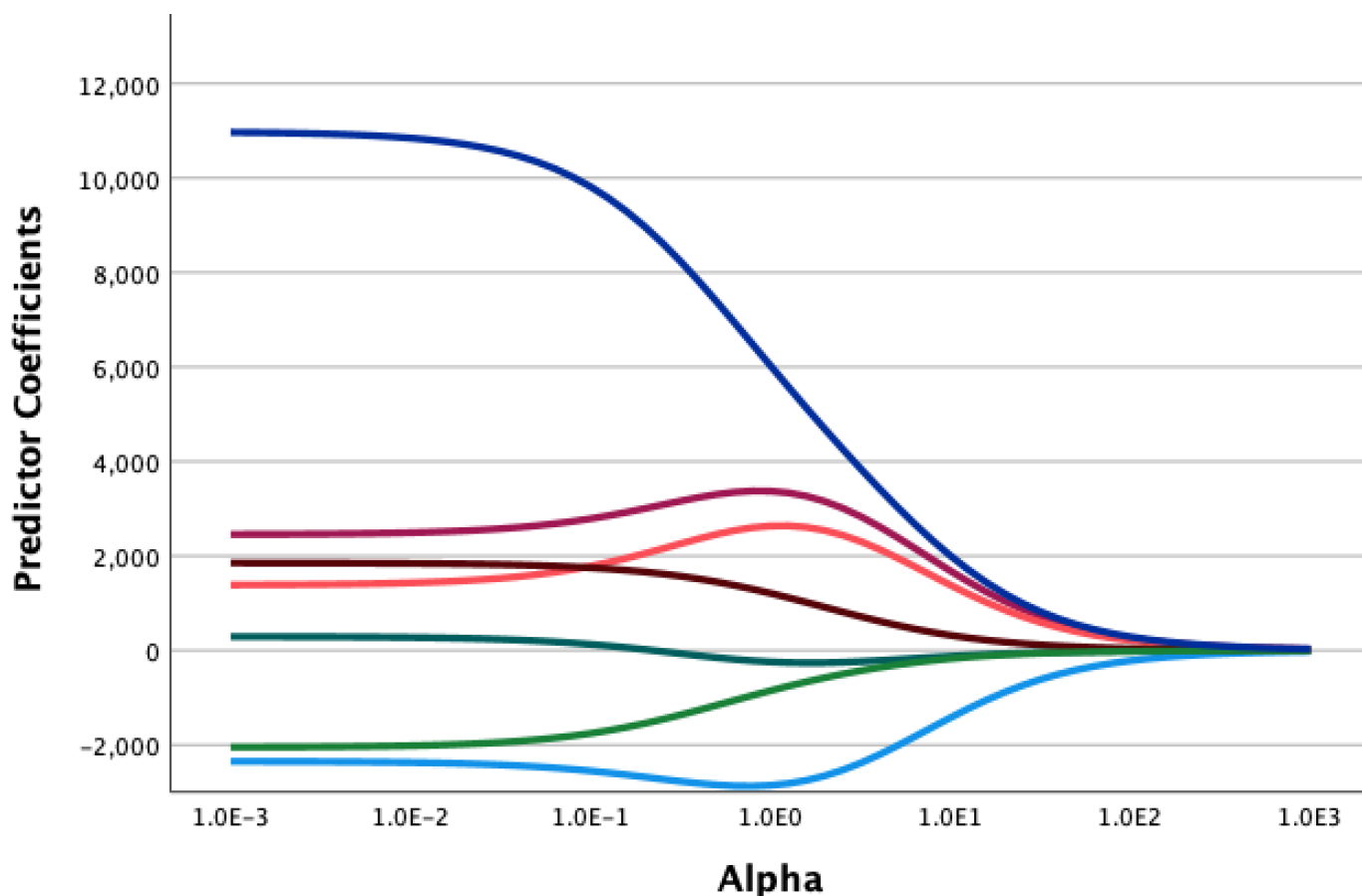and for students worldwide*

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Below is an overview of What's New in SPSS Statistics 29:

1. New procedures
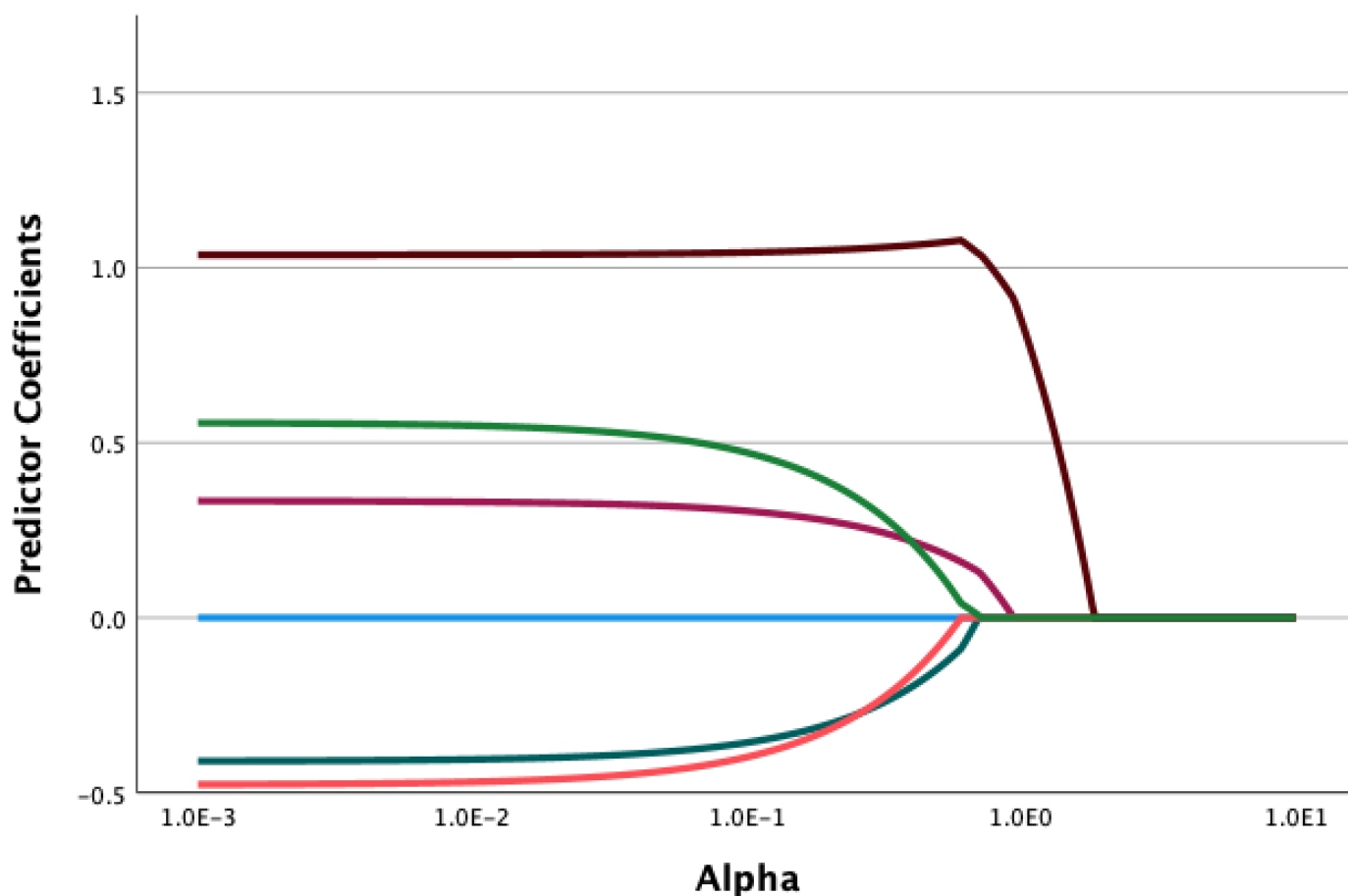
Linear OLS Alternatives
Elastic Net

The new linear elastic net extension procedure estimates regularized linear regression models for a dependent variable on one or more independent variables. The graph represents example output for the procedure.

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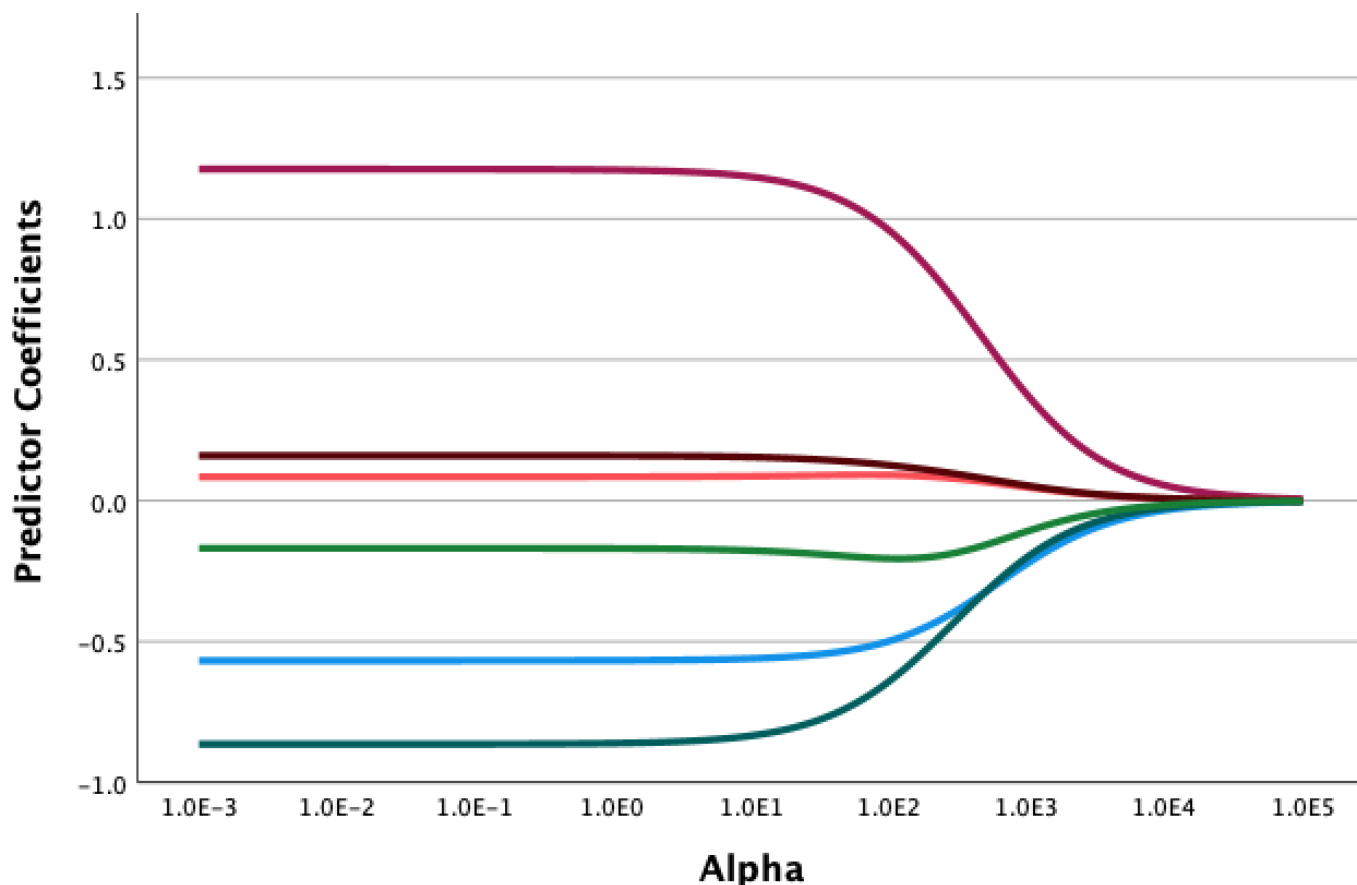*The SPSS experts in Australia and for students worldwide*

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Lasso

The new linear lasso extension estimates L1 loss regularized linear regression models for a dependent variable on one or more independent variables and includes optional modes to display trace plots and to select the alpha hyperparameter value based on cross validation. The graph represents example output for the procedure.

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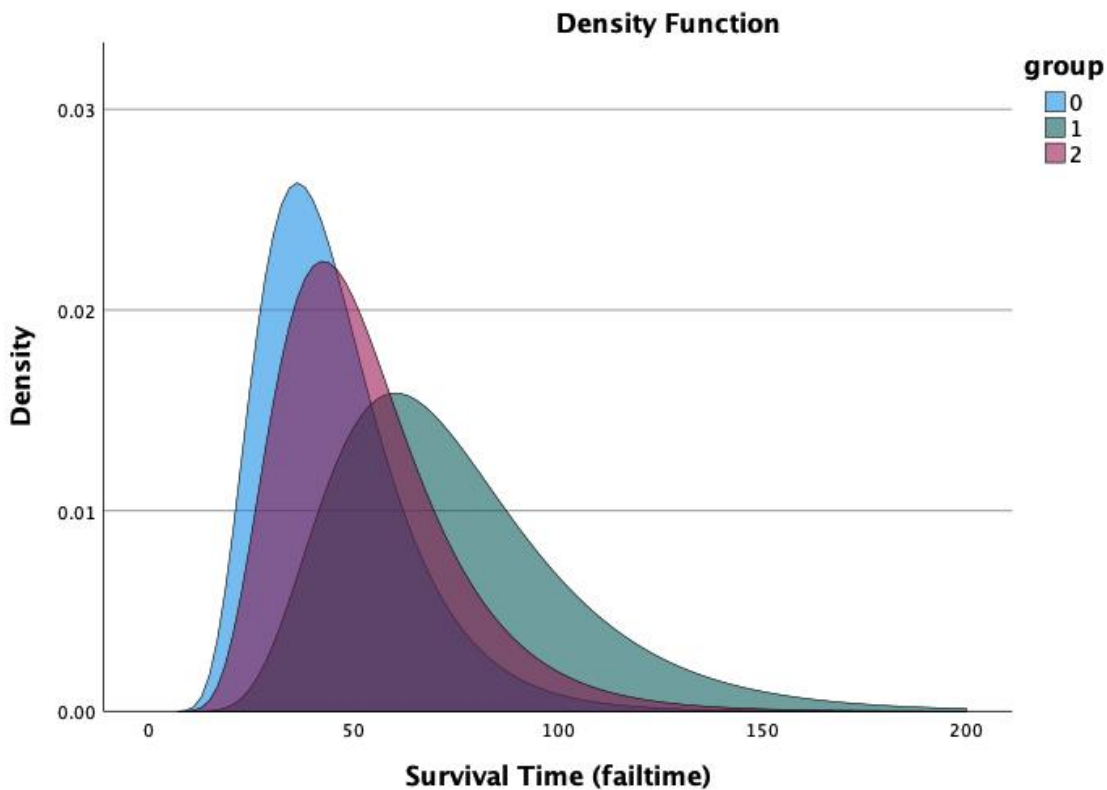
Ridge

The new linear ridge extension procedure estimates L2 or squared loss regularized linear regression models for a dependent variable on one or more independent variables, and includes optional modes to display trace plots and to select the alpha hyperparameter value based on cross validation. The graph represents example output for the procedure.

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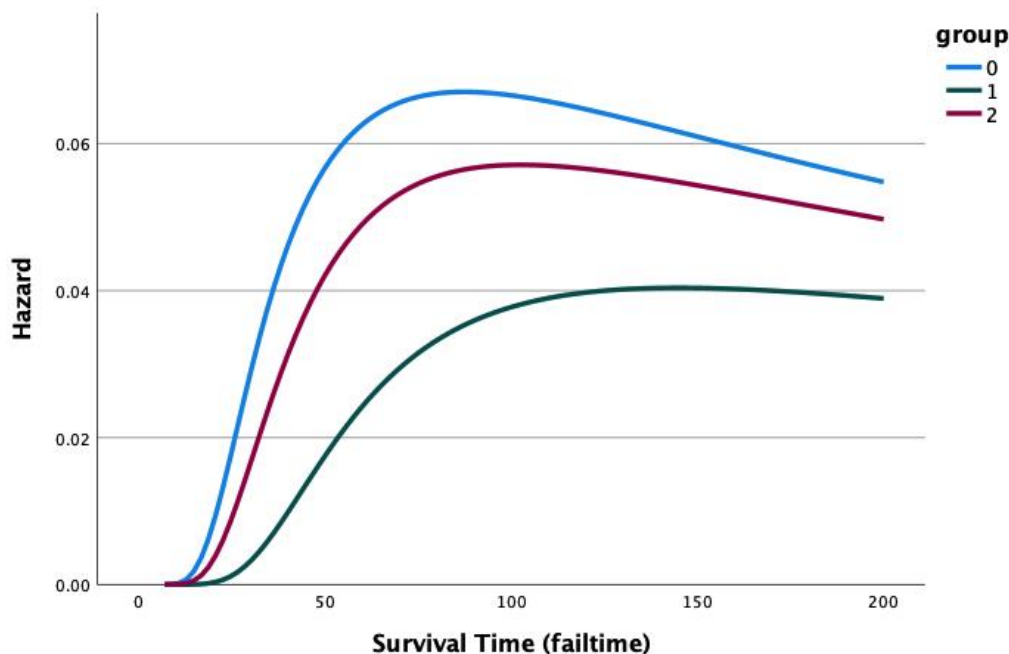
Parametric Accelerated Failure Time (AFT) Models

The new procedure invokes the parametric survival models procedure with non-recurrent life time data. Parametric survival models assume that survival time follow a known distribution, and this analysis fits accelerated failure time models with their model effects proportional with respect to survival time. The graph represents example output for the procedure.

Parametric Survival Model – SURV AFT

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Parametric Survival Model – SURV RECURRENT

Hazard Function

Pseudo-R^2 measures in Linear Mixed Models and Generalized Linear Mixed Models
Pseudo-R^2 measures and the intra-class correlation coefficient are now included in Linear Mixed Models and Generalized Linear Mixed Models output (when appropriate). The coefficient of determination R^2 is a commonly reported statistic, because it represents the proportion of variance explained by a linear model. The intra-class correlation coefficient (ICC) is a related statistic that quantifies the proportion of variance explained by a grouping (random) factor in multilevel/ hierarchical data.

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2. Command syntax

GENLINMIXED
The output now includes pseudo-R^2 measures and the intra-class correlation coefficient (when appropriate).

LINEAR_ELASTIC_NET
The new extension command uses the Python sklearn.linear_model.ElasticNet class to estimate regularized linear regression models for a dependent variable on one or more independent variables.

LINEAR_LASSO
The new extension command uses the Python sklearn.linear_model.Lasso class to estimate L1 loss regularized linear regression models for a dependent variable on one or more independent variables. The command includes optional modes to display trace plots and to select the alpha hyper-parameter value that is based on cross-validation.

LINEAR_RIDGE
The new extension command uses the Python sklearn.linear_model.Ridge class to estimate L2 or squared loss regularized linear regression models for a dependent variable on one or more independent variables. The command includes optional modes to display trace plots and to select the alpha hyper-parameter value that is based on cross-validation.

MIXED
The output now includes pseudo-R^2 measures and the intra-class correlation coefficient (when appropriate).

SURVREG AFT
The new extension command invokes the parametric survival models procedure with non-recurrent life time data.

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3. Usability Enhancements

Python and R upgrades
Python 3.10.4 and R 4.2.0 are installed with IBM® SPSS® Statistics 29.
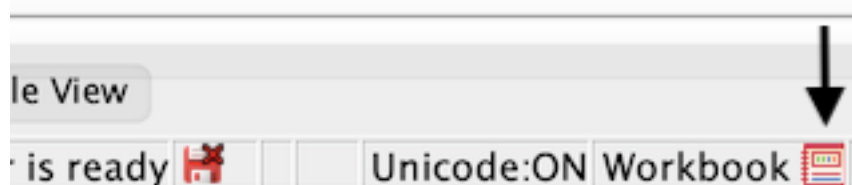
Removal of ability to hide unselected cases
Unselected cases are no longer hidden in the Data Editor when a subset of cases is selected, and the unselected cases are not discarded. This represents a return to the behavior of Statistics 27.0.1 and earlier versions.

Workbook mode enhancements
Two new workbook toolbar items have been added: Show/Hide all syntax windows and Clear all output. There is also a new button on the Status bar to switch between Classic (Output and Syntax) and Workbook modes.
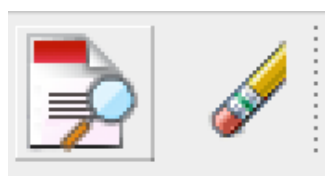
$16,800	98	137	1
$13,500	97	66	0
$15,000	97	24	0
$14,250	97	48	0
$27,510	97	70	0
$14,250	97	103	0
$11,550	97	48	0

le View

is ready   Unicode:ON Workbook

Search enhancements

The Search feature now provides options for entering terms directly in a toolbar field and for viewing results in a drop-down pane.

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4. Violin plots

The Graphboard Template Chooser includes a new violin plot, which is a hybrid of the box and kernel density plots. Violin plots show peaks in the data and are used to visualize the distribution of numerical data. Unlike a box plot that can only show summary statistics, violin plots depict summary statistics and the density of each variable.

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