Model Comparison and Selection

Use the Model Comparison platform to compare competing statistical models and select the best performing model. For details on fitting predictive models in JMP Pro see the guides and videos at jmp.com/learn under Data Mining.

Model Comparison – Continuous Response

Example: We use the Body Fat.jmp data to predict Percent body fat. Formulas for several models, saved to the data table, are grouped under Prediction Formulas in the column panel. The models were built using the Validation column, which in this example partitions the data into Training and Validation data.

1. Open the dataset, and select Analyze > Predictive Modeling > Model Comparison.
2. Select the prediction formula columns from Select Columns, and click Y, Predictors. If no columns are selected JMP will use all saved prediction formulas.
3. Select Validation from the Select Columns list, and click By. Then, click OK.

JMP provides the following statistics for comparing the performance of the different models (statistics for the Validation set are displayed):

- RSquare (higher is better)
- RASE: Root Average Squared Error (like RMSE, but can be compared for competing models)
- AAE: Average Absolute Error (a measure of the magnitude of the errors)

Model Comparison – Categorical Response

Example: In the Equity.jmp data, we predict Bad as a function of several predictors. In this example, the data were partitioned into Training, Validation and Test sets.

Create the predictive models of your choice (with Validation), then follow steps 1-3 above to generate model statistics for each value of the Validation column.

- The misclassification rate and other measures of performance are provided.
- ROC curves, lift curves, the confusion matrix and other options are available from the red triangles.

Notes: Additional options are available from the red triangles. Model Comparison is also available from the Formula Depot. For more details on model comparison and the Formula Depot, see the book Predictive and Specialized Modeling (under Help > Books) or search for “Model Comparison Platform” in the JMP Help.