

DTREG

Predictive Modeling Software

www.dtreg.com



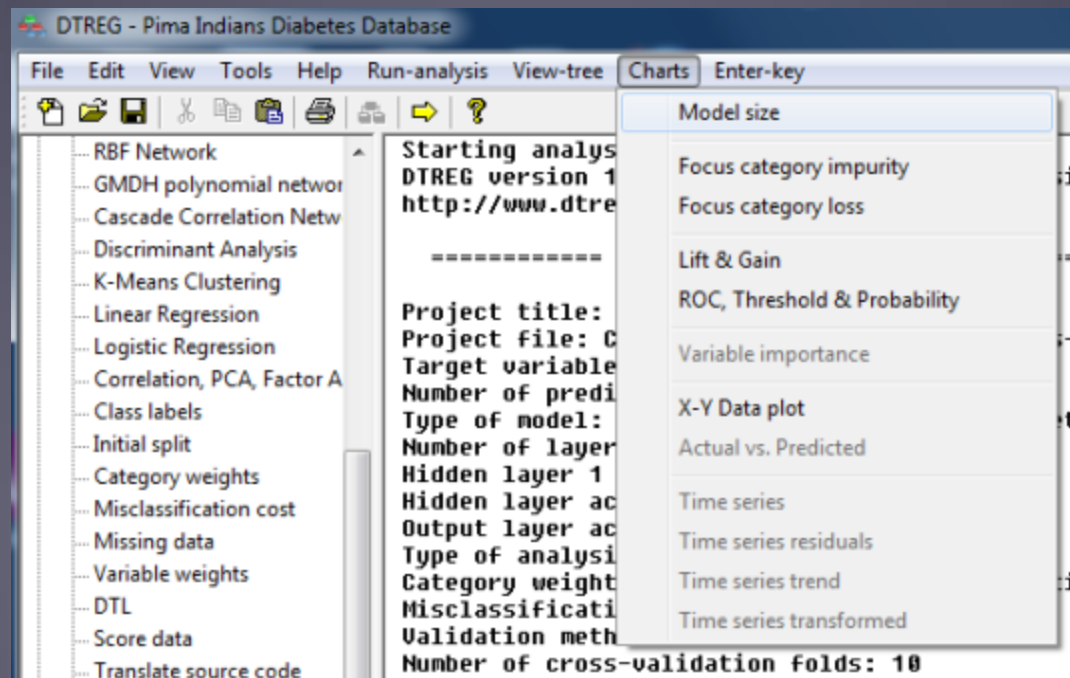
Charts and Graphs

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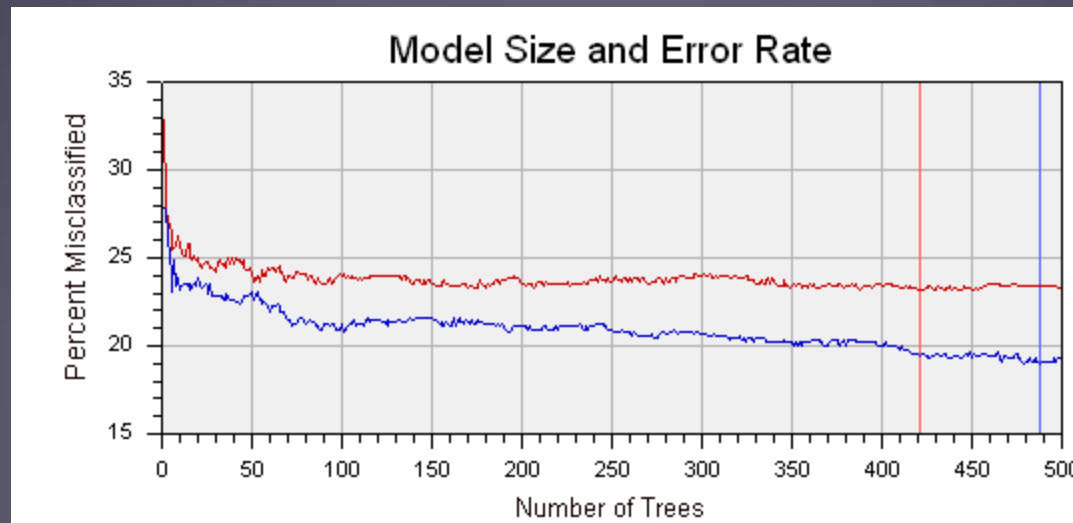
Charts and Graphs Produced by DTREG

- DTREG generates several charts and graphs that help interpret models.
- To view charts and graphs, click “Charts” on the main menu bar, and select the type of chart you want.



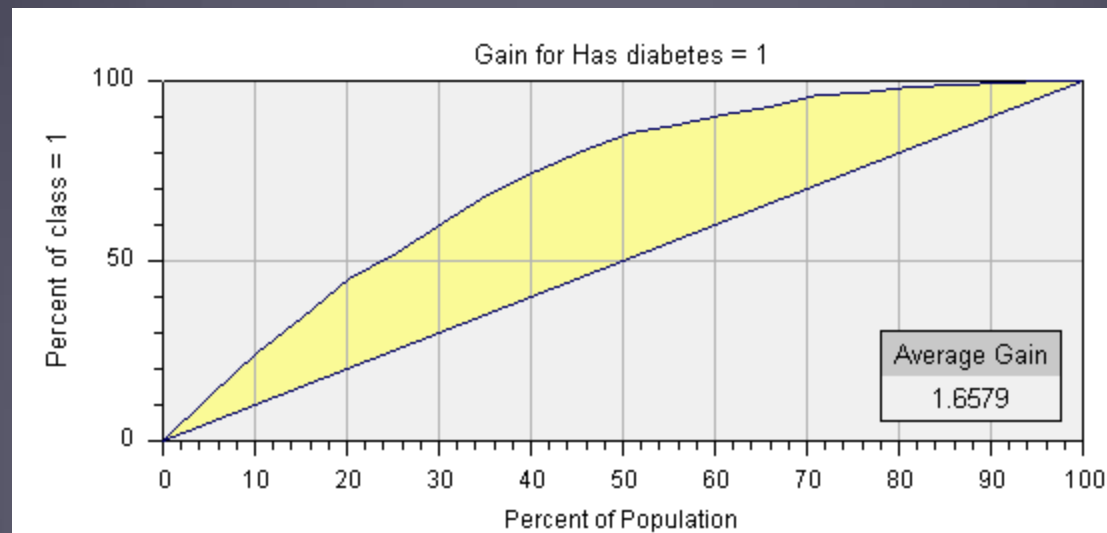
Model Size Chart

- The Model Size Chart is appropriate for neural networks and TreeBoost models which may have a variable number of neurons or trees. It shows how the error rate is affected by the number of items.
- The blue line shows training error and the red line shows validation error.



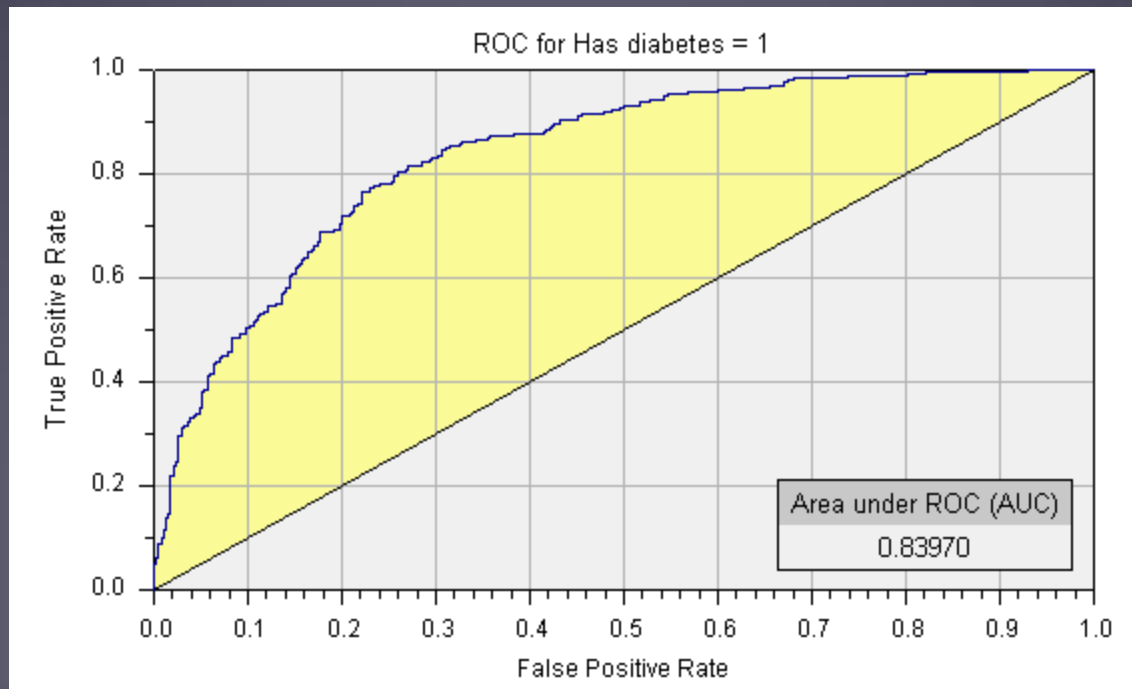
Lift and Gain Charts

Lift and Gain Charts show what proportion of the target population can be identified by selecting a proportion of the population identified as having the highest probability. The chart below shows by selecting the 30% with the greatest risk, the model identifies 60% of the population with diabetes.



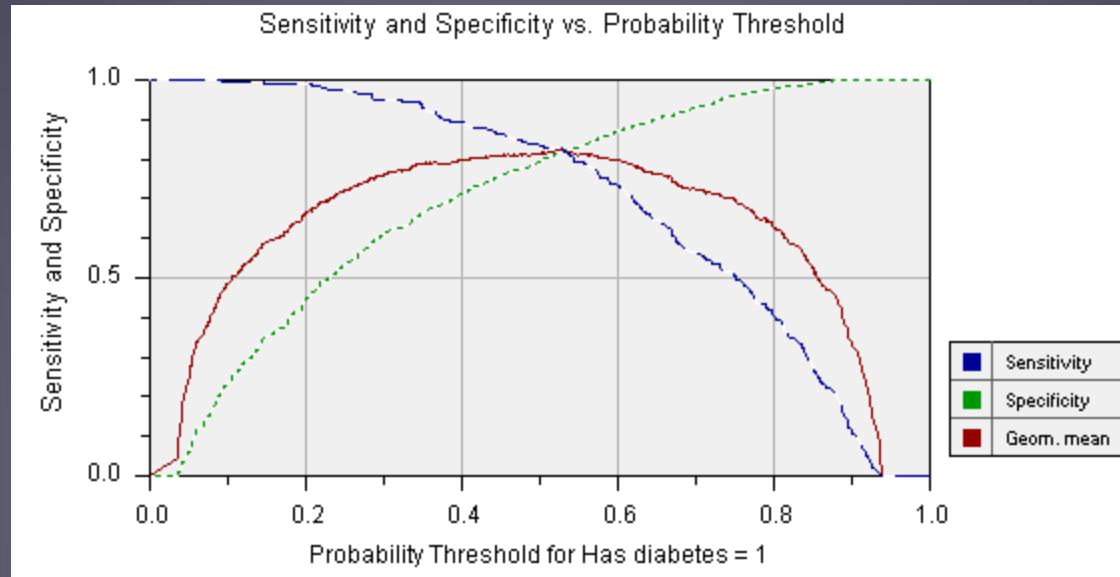
Receiver Operating Curve (ROC)

The ROC chart displays the relationship between the false positive rate shown on the horizontal axis with the true positive rate shown on the vertical axis. The area under the curve (AUC) also is displayed. The bigger the AUC value, the better the model fits the data.



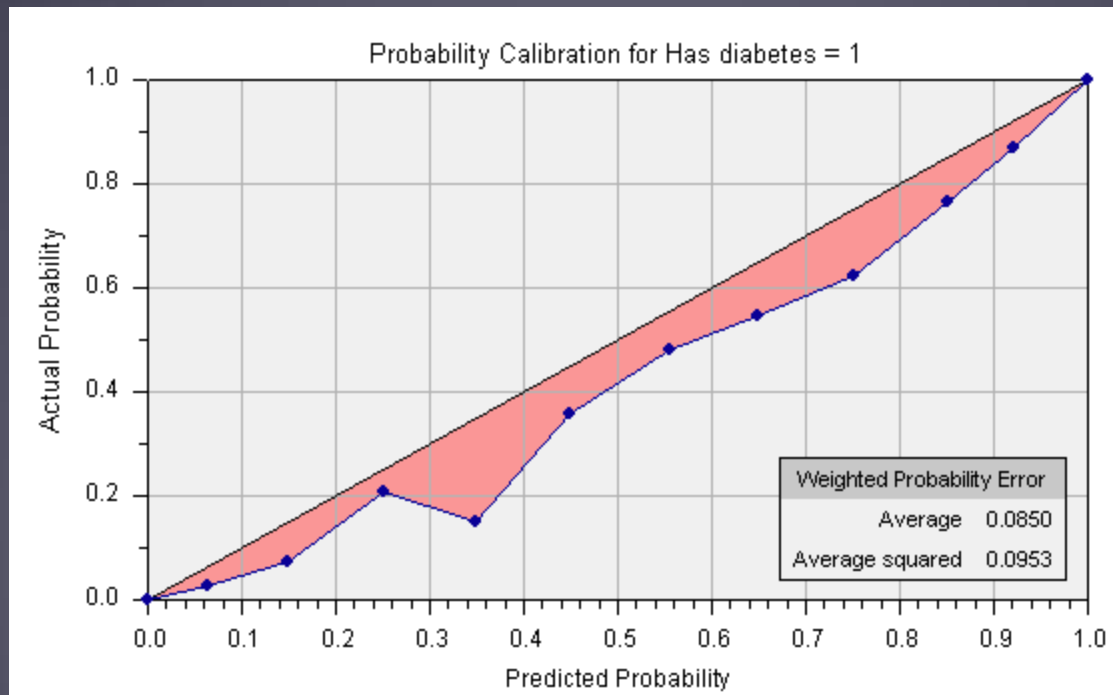
Sensitivity and Specificity Chart

Sensitivity measures the proportion of positive (true) cases that are correctly identified as positive, and specificity measures the proportion of negative (false) cases that are identified as negative. The chart depicts how sensitivity and specificity are affected by adjusting the true/false probably split threshold. Generally, it is desirable to balance sensitivity and specificity.



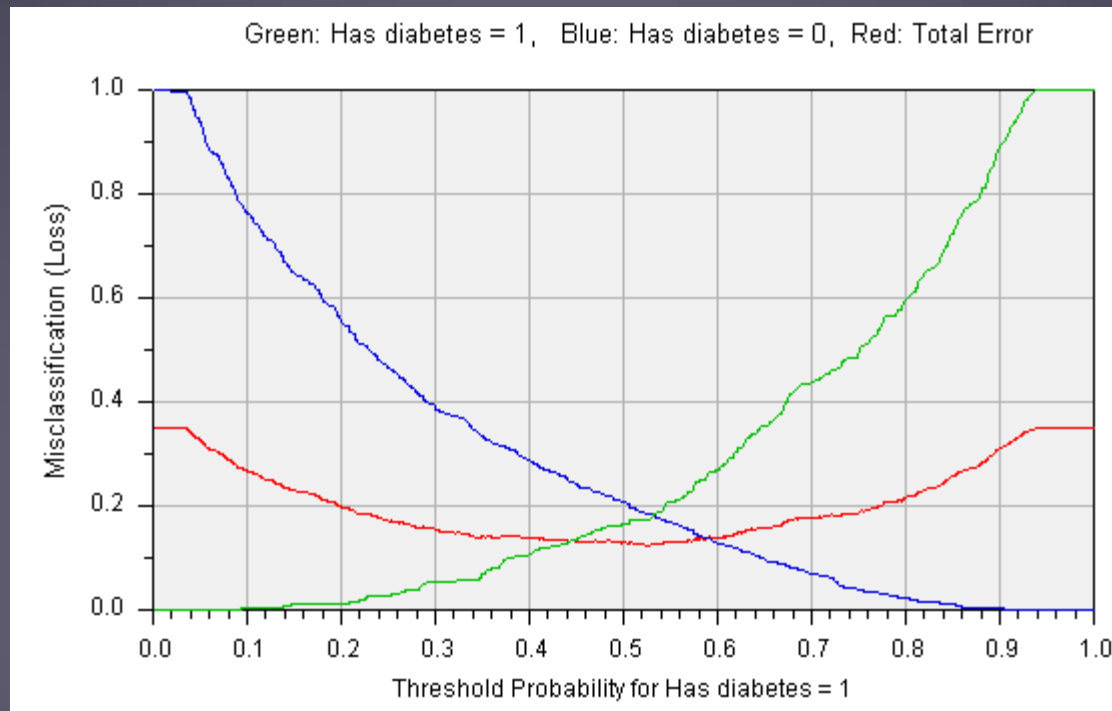
Probability Calibration Chart

The Probability Calibration Chart shows the accuracy of predicted probability values. If the actual probability of occurrence matches the predicted probability, all points are on the diagonal line. Errors in probability prediction are shown by the red area.



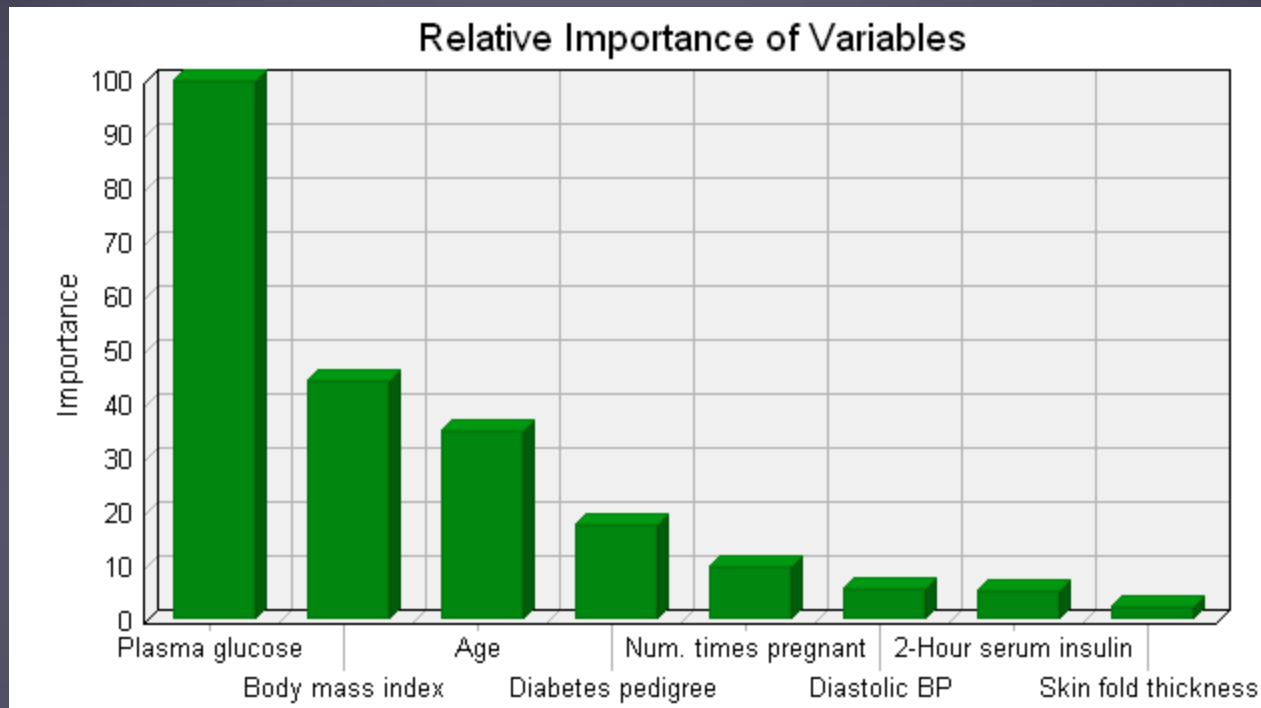
Balance Chart

The Balance Chart shows how the error rate is affected by shifting the threshold point used to classify true/false cases. The green line depicts error on positive predictions, the red blue line depicts error on negative predictions, and the red line depicts total errors. Usually it is desirable to select a threshold that minimizes the total error (red line).



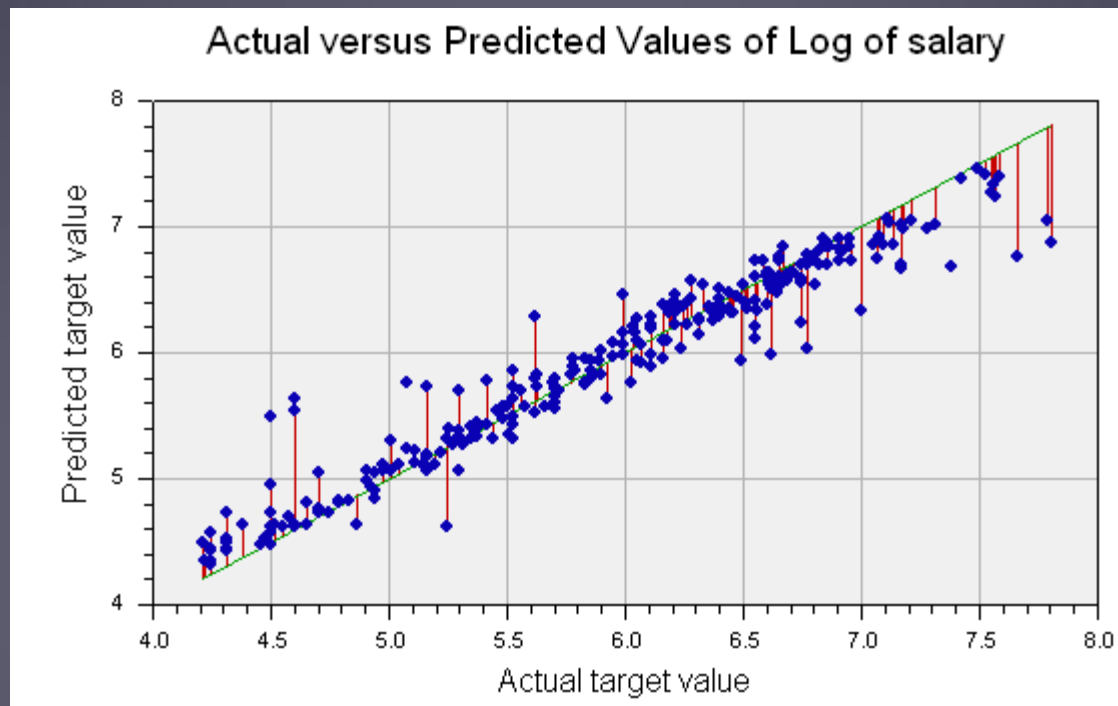
Variable Importance Chart

The Variable Importance Chart depicts the relative importance of the most important predictor variables. The most important variable importance is scaled to 100. The relative importance of other predictors are shown by their relative height on the chart.



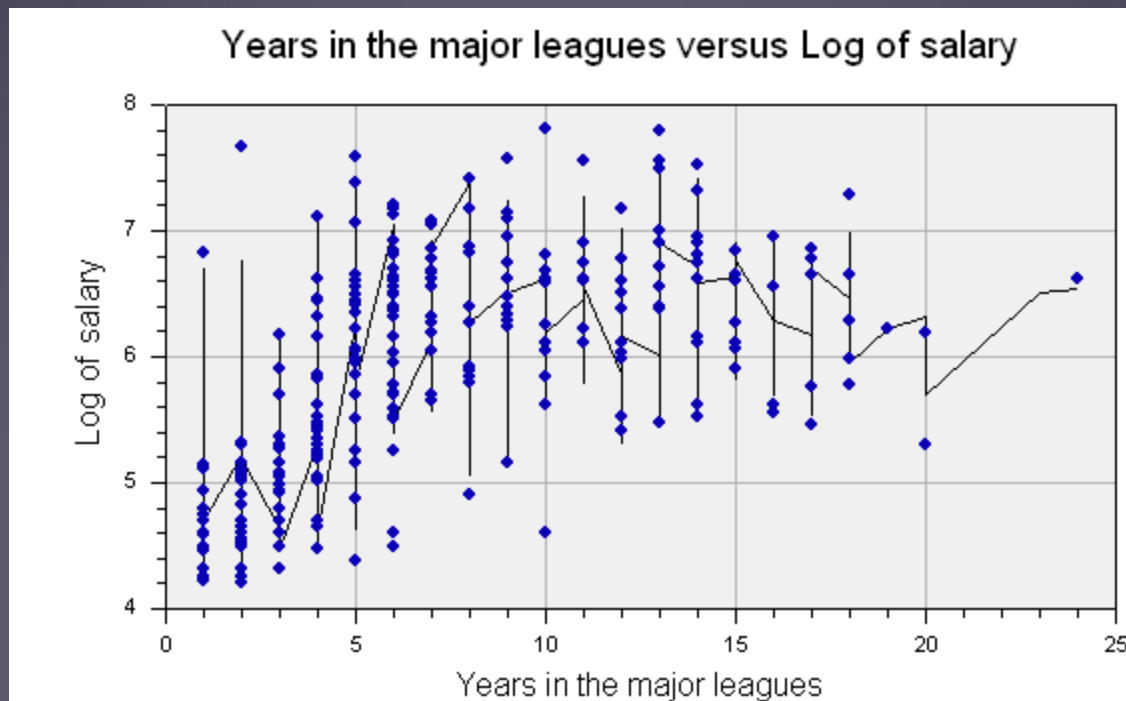
Actual vs. Predicted Value Chart

The Actual vs. Predicted Value Chart is only available when the target variable is continuous. The horizontal axis has the value of actual target values, and the vertical axis shows the predicted target value for the corresponding point. If predictions are perfect, all points would be on the diagonal line. Errors are shown by lines and dots deviating from the horizontal line.



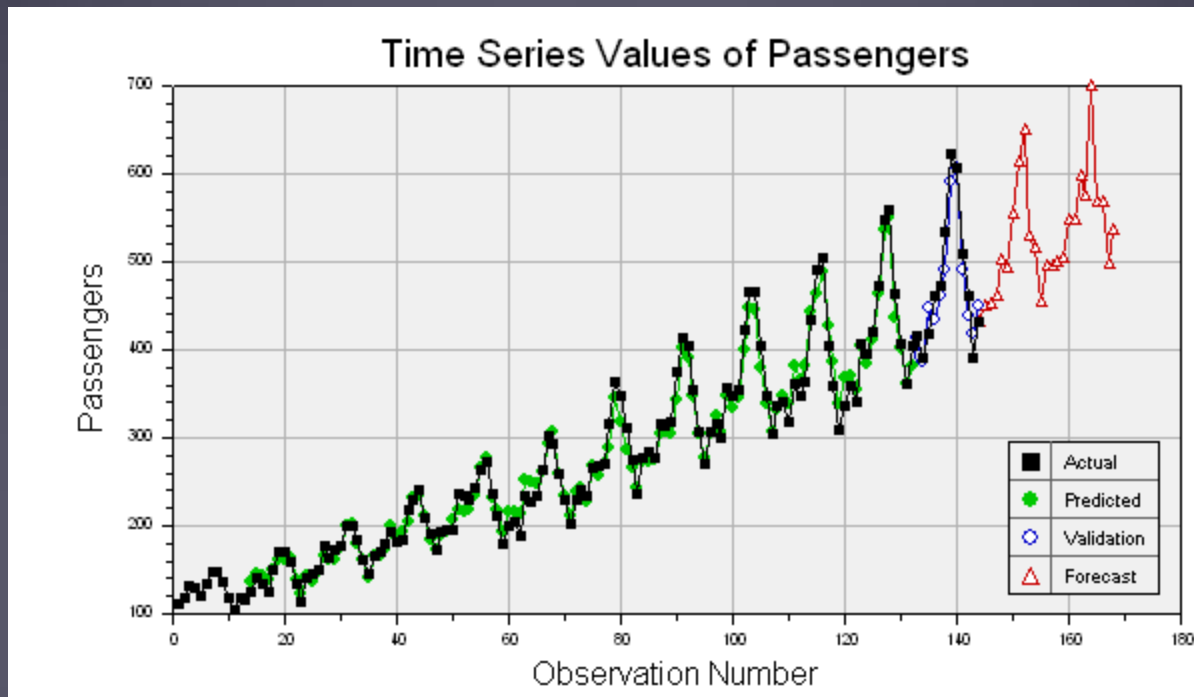
X-Y Data Plot Chart

The X-Y Data Plot Chart displays the relationship of two variables that you select. The value of one variable is represented by the horizontal axis, and the corresponding value of the other variable for each data point is shown on the vertical axis.



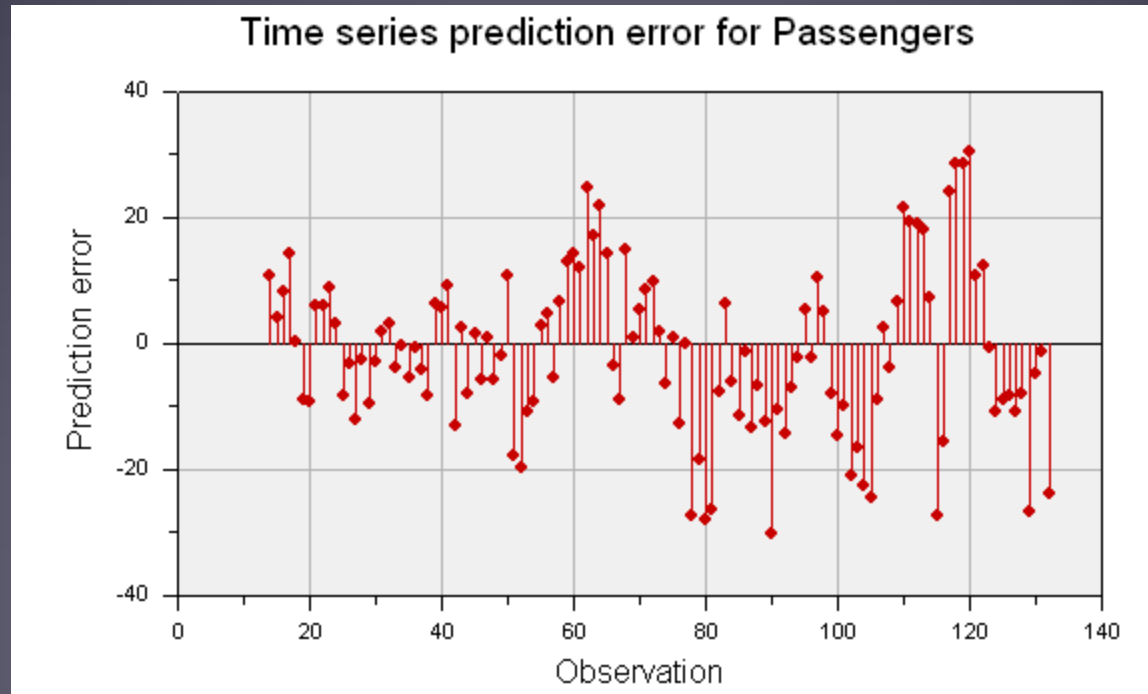
Time-Series Chart

The Time-Series Chart is available only when performing a time-series analysis. It shows the actual values, the predicted values and the forecast future values.



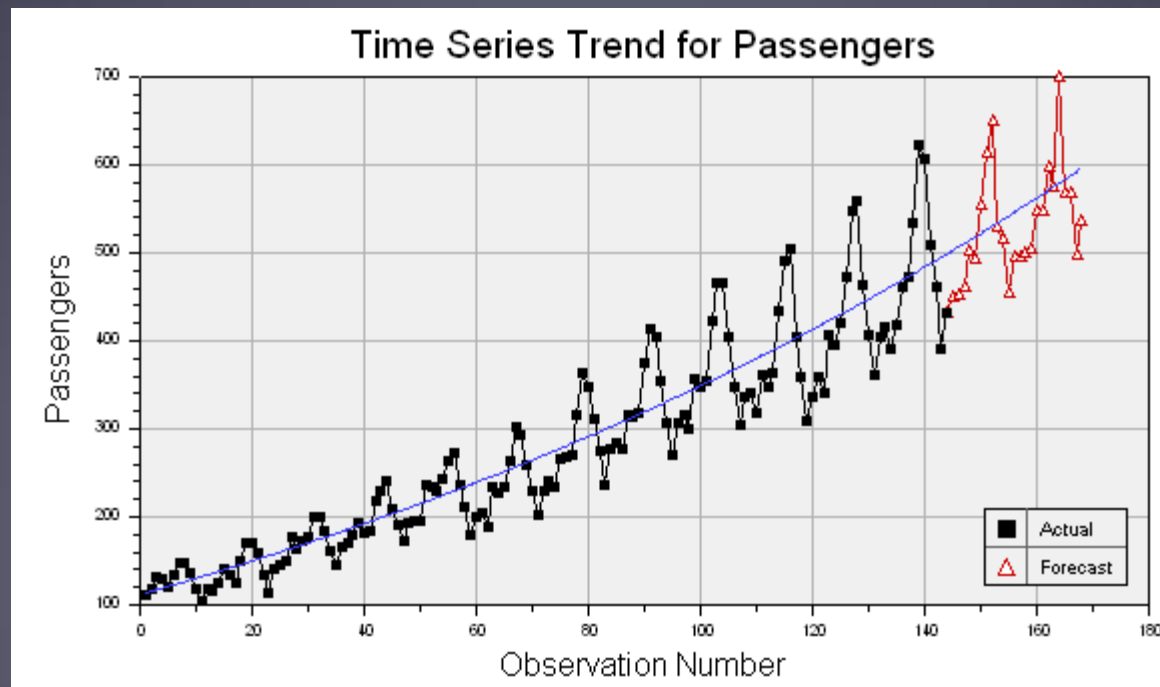
Time-Series Residual Chart

The Time-Series Residual Chart shows the residual (error) between the predicted values and the actual values over time.



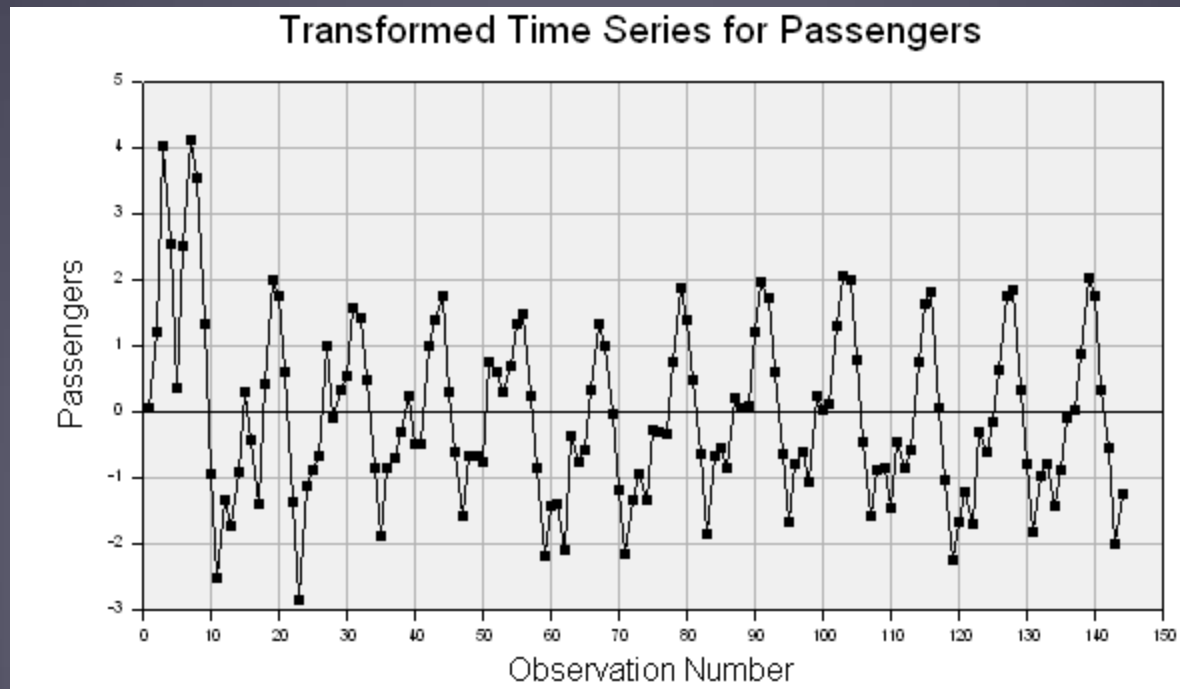
Time-Series Trend Chart

The Time-Series Trend Chart shows the computed trend line fitted to a set of time series points. When performing a time-series analysis, DTREG computes the trend and subtracts it from the data points before looking for cyclical patterns.



Time-Series Transformed Chart

The Time-Series Transformed Chart shows the time-series data points after the trend line has been subtracted. When performing a time-series analysis, DTREG computes the trend and subtracts it from the data points before looking for cyclical patterns.



End of Tutorial

- This completes the Charts and Graphs DTREG training tutorial