Logistic Regression 3 Objectives

The scope of services in this phase includes the following:

• For this phase use **only** the binned data sets (both training and validation will be needed).

* + Report the variables used in your final logistic regression model to predict the purchase of the new insurance product.
    - (HINT: Feel free to use the final model you had from the previous report or build a whole new model if you are not satisfied with your previous one. If building a new model, detail the process you took for variable selection.)
    - Rank each of the variables by p-value.
  + Report and interpret the following probability metrics for your model on **training data**.
    - Concordance percentage.
      1. **0.7968226**
    - Discrimination slope – provide the coefficient of discrimination as well as a visual representation through histograms.
      1. **0.241563**
  + Report and interpret the following classification metrics for your model on **training data**.
    - Visually show the ROC curve.
    - (HINT: Although this is one of the **only** times I will allow SAS output in a report, make sure the axes and title are well labeled.)
    - K-S Statistic. The Bank currently uses the K-S statistic to choose the threshold for classification but are open to other methods as long as they are documented in the report and defended.
  + Report and interpret the following classification metrics for your model on **validation data.** 
    - Display your final confusion matrix.
    - Accuracy.
    - Lift – add a visual to help show the model performance.
  + (HINT: These steps are here to help you build your model, but **not** to tell you which order to write your report. Consider the most important information when done with these questions and write your report accordingly.)