**Deep Learning Challenge**

*Overview of Analysis:*

Alphabet Soup, a non-profit is looking to create an algorithm to predict whether applicants for funding will succeed. The end goal is to create a binary classifier that predicts whether applicants will be successful if funded by Alphabet Soup.

*Results:*

To clean up the initial data set it was important to remove any information that was not relevant. After dropping EIN and Name the rest of the columns were included. Name was added back into the second test for binning purposes The data was then split for training and testing . The target variable for the model was labeled ‘IS\_SUCCESSFUL’ and was given a value of 1 for yes and 0 for no. APPLICATION was then analyzed and ‘CLASSIFICAITON’ values were used for binning.

*Compiling, Training, and Evaluating the model:*

There were 3 layers total for each model after leveraging Neutral Networks. The hidden nodes were assigned by the number of features. 477 parameters were created by the 3-layer training model. The first attempt was 73% accurate which fell short of the 75% goal. The second attempt with the ‘NAME’ column, achieved an accuracy of 78%, landing over the target of 75% with 3,298 parameter.