**Report on the Neural Network Model**

**Background**

The nonprofit foundation Alphabet Soup wants a tool that can help it select the applicants for funding with the best chance of success in their ventures.

**Step** Read the csv

Remove unnecessary information including EIN and NAME

A split for training and testing occurred.

The Target of “Is-Successful” with a value of 1. 0 is no

Binning of CLASSIFICATION value and analysis of APPLICATION data

Find cutoff points to do binning variables

Encode by using get\_dummies

**Model**

Logistic Regression (LR), Random Forest, XGBoost and Neural Network models were used to identify the best model. Among the LR, Random Dorest, XGBoost, XGBoost seems to be a better model with the Briar score of 1587 and accuracy at 73%

The first neural network model has params at 403, 2 nodes layers , 73% accuracy on training set and 78% on the model.

Chart, line chart

Description automatically generated

The second neural network model has params at 6,272, 3 nodes layers73% accuracy on training set and 78% on the model.

Chart, line chart

Description automatically generated

The 3rd neural network model has params at 16,481, 2 nodes layers and accuracy 73% on training set and 78% on the model.

Chart, line chart

Description automatically generated