Neural Network Homework Report

**Overview:**

As a member of a nonprofit foundation Alphabet Soup I was tasked to create a neural network tool use a dataset to help select applicants with the best chance of success in their futures. Using my knowledge of Machine Learning, Neural Networks, Pandas, Binary Classifier I was able to help my foundation in predicting the best applicants from the dataset.

**Results:**

* **Data Preprocessing**

First, I dropped EIN and NAME columns to begin cleaning my data. Following that I found the number of unique values for each column, I picked a cutoff point to bin “rare” categorical variables, and then converted all categorical variables to quantitative variables.

* **Compiling, Training, and Evaluating the model**

I chose 2 hidden layers and an output layer for my neural network model and selected 150 for the number of Epoch. I chose 150 because I wanted the most accurate model and the accuracy for my model is 0.73. Steps I took to increase the accuracy was mainly increasing epoch numbers.

**Results:**

My results include an accuracy of 0.73. I found that increasing the input allows the model to become more accurate.