Neural Network Model Report

Overview

The purpose of this analysis was to design a neural network to create a binary classification to predict if an Alphabet Soup-funded organization would be successful based on the features of the dataset. From there, using TensorFlow I tried to optimize my model to achieve a target predictive accuracy higher than 75%.

Results

Data Preprocessing:
- The variables that were the target of the model were "application type" and "classifications".
- The variables that was the feature for the model was "Is Successful"
- The variables that should be removed from the input data because they weren't targets or features were "EIN" and "Name"

Compiling, Training, and Evaluating the Model:
- I tried changing the layers to have 4 instead of two to see if that would change the model performance, but that did not have an effect.
- I tried changing the epoch to be higher than 100, but that also did not have an effect on the model performance
- I brought back the "EIN" to see if that would have an effect on the model performance, and it did slightly, but not enough.
- I did not achieve the target model performance

Summary

Now that I am looking back on it, I am wondering if I took a closer look at the organization type or the funding amount requested (changing the number of features) to see if that would give more insight into predicting whether applicants would be successful. The results of each of my model attempts did not improve the accuracy enough to reach the desired accuracy of 75%. I believe that removing outliers would help improve the accuracy.