Alex Heilman
7/24/23

1. **Overview:**
    - **a.** The purpose of this analysis is to build a neural network that a nonprofit, Alphabet Soup, can use to select funding applicants who have the best chance of success.

2. **Results:**
    - **a.** The variable that I decided to use for my target was the “IS_SUCCESSFUL” column of the data. All the other columns were used as features for this model. The variables that were removed were the “EIN” and “NAME” columns used for identification as neither of these were needed for features or a target.
    - b. I chose to use 2 layers with 10 neurons in the first, and 8 neurons in the second for my neural network. I also chose to use the “tanh” activation function in my layers, and a “sigmoid” activation in the output layer. I believed that this would lead to a highly accurate model that would perform well when given novel data. Fortunately, I was able to achieve that target model performance on the first build.

```
268/268 - 0s - loss: 3.8704e-07 - accuracy: 1.0000 - 347ms/epoch - 1ms/step
Loss: 3.8704064309058595e-07, Accuracy: 1.0
```

3. **Summary:**
    - a. Overall, this model performed well. It was able to predict the outcome with 100% accuracy using this data set, so it should perform well when given a new dataset.