OVERVIEW:

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. We will use the features in the provided dataset to create a binary classifier that can predict whether applicants will be successful if funded by Alphabet Soup.

DATA PROCESSING:

What variable(s) are the target(s) for your model?
Unnecessary columns were removed, such as EIN and NAME. All other metrics were used.
What variable(s) are the feature(s) for your model?
Classification and Application Type.

COMPILING, TRAINING AND EVALUATING THE MODEL:

The original Neural Network used 2 layers. A third layer was added on last model version to see if we could improve performance, but there wasn't a significant increase.

RESULTS:

ATTEMPT #1

Application type cutoff = 550
Classification cutoff = 550
Layer 1 = 10 - Activation function = relu
Layer 2 = 20 - Activation function = relu
Loss = 55%
Accuracy = 72.92%
EPOCHS = 100

ATTEMPT #2

Application type cutoff = 500
Classification cutoff = 1000
Layer 1 = 9 - Activation function = relu
Layer 2 = 6 - Activation function = relu
Loss = 55%
Accuracy = 73%
EPOCHS = 100

ATTEMPT #3

Application type cutoff = 500
Classification cutoff = 1000
Layer 1 = 10 - Activation function = relu
Layer 2 = 15 - Activation function = relu
Layer 3 = 25 - Activation function = relu
Loss = 55%
Accuracy = 72.95%
EPOCH = 200

SUMMARY:

Even with a third hidden layer, and a higher EPOCH amount, 73% was the highest accuracy percent that was achieved.