Analysis Report

Purpose of the analysis:

The nonprofit foundation Alphabet Soup wants a tool to help it select the applicants for funding with the best chance of success in their ventures. I wanted to create a binary classifier that can predict whether applicants will be successful if funded by Alphabet Soup.

Results:

- Target Variable: 'IS_SUCCESSFUL' column in application_df
- Feature Variables: Every column that was in application_df that was not 'IS_SUCCESSFUL'
- Dropped/Removed Variables: 'EIN' and 'NAME' were removed as they were neither targets or features
- Neurons, Layers, and Activation Functions: I used three hidden node layers and using 4, 8, and 16 for the layers
- Target Model Achieved?: No, it was just under 75% at 73%
- Steps Taken to Increase Performance: I added back the 'NAME' column to help binning. This helped it reach an accuracy 78.5%

Summary:

The deep learning model was about 73% accurate. Using a different model, the accuracy was raised to 78.5%. A recommendation for another model would be to have it use inputs with more correlation as well as adding more activation functions and nodes to better predict the problem.