1. **Overview** of the analysis: Explain the purpose of this analysis.

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. Using machine learning and neural networks, I used the dataset to create a classification that can predict whether applicants will be successful if funded.

1. **Results**: Using bulleted lists and images to support your answers, address the following questions:

Data Preprocessing

* + What variable(s) are the target(s) for your model?
* 'IS\_SUCCESSFUL' column from application\_df
  + What variable(s) are the features for your model?
* The feature variables are every other column from application\_df. This was defined by dropping the 'IS\_SUCCESSFUL'
  + What variable(s) should be removed from the input data because they are neither targets nor features?
* 'EIN' and 'NAME' columns were dropped/removed

Compiling, Training, and Evaluating the Model

* + How many neurons, layers, and activation functions did you select for your neural network model, and why?
* In the first attempt, I used 8 hidden\_nodes\_layer1and hidden\_nodes\_layer2. These were predicted to get a high accuracy.
  + Were you able to achieve the target model performance?
* not able to achieve the 75% model accuracy target
  + What steps did you take in your attempts to increase model performance?
* Added more layers and hidden nodes.

1. **Summary**: Summarize the overall results of the deep learning model. Include a recommendation for how a different model could solve this classification problem, and then explain your recommendation.

Overall, the deep learning model was around not quite 75% accurate in predicting the classification problem. Using a model with higher correlation between input and output would likely result in higher prediction accuracy. To achieve this, we could use a model with different ways to activate the functions and moved data out of the original dataset to narrow it down.