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

* 1. The purpose of this analysis is to see what can be used to best predict the output or outcome of a successful or failed donation.

**\*\*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
* What variable(s) are the features for your model?
  + Application\_Type, Classification, Ask amounts
* What variable(s) should be removed from the input data because they are neither targets nor features?
  + EIN, Name

\* Compiling, Training, and Evaluating the Model

* How many neurons, layers, and activation functions did you select for your neural network model, and why?
  + Initially, 40 neurons were used among the hidden layers and there were two hidden layers with “relu” being the activation function and “sigmoid” being the activation function for the output layer
* Were you able to achieve the target model performance?
  + No
* What steps did you take in your attempts to increase model performance?
  + To increase performance, a third hidden layer was initially added.
  + After that did not work, I looked at the big differences in the feature of “ASK\_AMT” and it prompted me to think that there would be some outliers that may need to be removed in order to improve the model

**\*\*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.

* + After the removal of the outliers in the asked amount, there was an increase in the model performance.
  + When comparing the optimized model and the original, the loss stayed similar with the values being .5534 and .5538 respectfully. Additionally, the accuracy model saw an increase from .7305 to .7494 which should mean there are a few small errors in comparison to the original.
  + I suggest using random forest\_classfier in this dataset to see if results match or if they will be a more/less accurate.