1. **Overview** of the analysis:

The purpose of this analysis is to build a tool that can help the applicants for funding by predicting which ventures will be successful.

1. **Results**:

* Data Preprocessing
  + What variable(s) are the target(s) for your model?
    - IS\_SUCCESSFUL—Was the money used effectively
  + What variable(s) are the features for your model?
    - **APPLICATION\_TYPE**—Alphabet Soup application type
    - **AFFILIATION**—Affiliated sector of industry
    - **CLASSIFICATION**—Government organization classification
    - **USE\_CASE**—Use case for funding
    - **ORGANIZATION**—Organization type
    - **STATUS**—Active status
    - **INCOME\_AMT**—Income classification
    - **SPECIAL\_CONSIDERATIONS**—Special considerations for application
    - **ASK\_AMT**—Funding amount requested
  + What variable(s) should be removed from the input data because they are neither targets nor features?
    - EIN and NAME – the Identification columns
* Compiling, Training, and Evaluating the Model
  + How many neurons, layers, and activation functions did you select for your neural network model, and why?
    - Neurons: 263
    - Layers: 3
    - Activation Functions: 2 (relu & sigmoid)
    - Why: After trying more than 7 variations of the model, experimenting with the number of neurons and layers, various activation function types, removing feature variables, etc., the most accurate model I created was set up this way.
  + Were you able to achieve the target model performance?
    - No, after all those attempts, the best accuracy score achieved was 72.57%.
  + What steps did you take in your attempts to increase model performance?
    - I experimented with the number of neurons and layers, various activation function types, removing feature variables, etc., but this was my most accurate model.

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.

This deep learning model does a moderately good job of predicting if a venture is successful but, unfortunately, it falls short of our target mark of 75% accuracy. The changes made to the numbers of neurons, various activation types, and even adding an additional hidden layer had very minimal effects on the accuracy of the model. However, whenever a feature was dropped, the accuracy was reduced significantly. This suggests that having more features would help the machine learning model more accurately predict the target output variable of whether a venture will be successful or not.