1. **Overview** of the analysis: Explain the purpose of this analysis.
   * The purpose of this analysis is to create a binary classification model that can predict if the organization will be successful. Using machine learning and neural networks to analyze a CSV file containing over 34k lines.
2. **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?
    - The “IS\_SUCCESSFUL” column in application\_df the target variable.
  + What variable(s) are the features for your model?
    - * "APPLICATION\_TYPE" & "CLASSIFICATION" are two features of the model from application\_df.
  + What variable(s) should be removed from the input data because they are neither targets nor features?
    - 'EIN' and 'NAME' columns were dropped/removed because it was requested to do so. It provided no benefits.
* Compiling, Training, and Evaluating the Model
  + How many neurons, layers, and activation functions did you select for your neural network model, and why?
  + Were you able to achieve the target model performance?
    - No I was not able to achieve the target model performance as it always stayed around 73%
  + What steps did you take in your attempts to increase model performance?
    - The first attempt I did add 2 hidden layers with 16 neurons with Relu activation. Output layer I used the sigmoid activation.

A screenshot of a computer

Description automatically generated

* + - The second attempt I added three hidden nodes with activation Relu. The outer layer was the same as first.

A screenshot of a computer program

Description automatically generated

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.
   * In the two attempts, the model did not reach the desired target of 75% accuracy. The highest it got was 72.9% in the second attempt. I would use other classification models to see if they can predict a higher accuracy %.