**Deep Learning Report**

1. **Overview** the purpose of this analysis is to predict whether or not an application for charity funding will be successful

* Data Preprocessing
  + What variable(s) are considered the target(s) for your model?
    - Is\_successful
  + What variable(s) are considered to be the features for your model?
    - APPLICATION\_TYPE
    - AFFILIATION
    - CLASSIFICATION
    - USE\_CASE
    - ORGANIZATION
    - STATUS
    - INCOME\_AMT
    - SPECIAL\_CONSIDERATIONS
    - ASK\_AMT
  + What variable(s) are neither targets nor features, and should be removed from the input data?
    - 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?
    - For my original model I used 13 neurons, 2 layers, and the Relu activation function
  + Were you able to achieve the target model performance?
    - No
  + What steps did you take to try and increase model performance?
    - First attempt: I increased the number of layers to 3
    - Second attempt: I changed the activation function to Sigmoid on the hidden layers
    - Third Attempt: I increased the number of layers to 3 and increased the total nodes to 45.

1. **Summary**: The model was able to be trained to around 72% accuracy although we did wonder how these factors would have changed had we used a Random Forest Classifier.