**Written Report**

**Overview**

The purpose of this analysis is to help a non-profit company predict which applicants have the best chances of success in their venture. This dataset contains data on the type of organization, use case for funding, income classification, amount of funding requested, and indication of success. Using neural networks, we can use independent variables within the dataset to explain the dependent variable (success).

**Data Processing**

* Model Target = IS\_SUCCESSFUL
* Model Features = All variables except IS\_SUCCESSFUL and STATUS
* Model Inputs to Remove = STATUS

In my model, I used all the variables in the dataset to help explain the success datapoint. I also took out status because it is not relevant to the analysis.

**Compiling, Training, and Evaluating the Model**

* For two versions of my model, I used three layers and for my third version I used two layers. I also changed the epochs from 100 to 200 and increased the number of nodes from 80 to 100 and 25 to 30. Due to the complexity in the data as it relates to predicting success, increase the number of layers allows the model to learn more. But three is the maximum that I would use. I also tried to increase the number of epochs to get to the optimal point.
* Unfortunately, I was unable to get my model above 75%.
* Making changes to the number of epochs and layers was my strategy but it did not work.

**Summary**

My accuracy got between 70%-74%. To make this model better; I would try refining the number of columns that I use in the features. I think focusing on income and use case would improve the accuracy of the model because they are two key inputs in the success of a venture.