**Overview**

The purpose of this project is to use machine learning and neural networks to help Alphabet Soup select the best applicants for funding. The data used was given by Alphabet Soup themselves and contains more than 34,000 organizations that have been funded by Alphabet Soup over the years.

**Results**

* Data Processing
  + Target Variable
    - The target variable for this model is “IS\_SUCCESSFUL”
  + Feature Variable
    - The feature variables for this model are application type, affiliation, classification, use case, organization, status, income amount, special considerations, and ask amount
  + Variables removed
    - EIN was removed as it is neither a target nor a feature
* Compiling, Training, Evaluating the Model
  + Neurons, layers, and activation functions
    - This model has an input layer, 2 hidden layers (first with 80 neurons, second with 30 neurons), and an output layer
  + Was target model performance achieved?
    - Unfortunately target performance was not achieved. In fact, the third attempt at optimization was worse than the previous attempts

**Summary**

The first and second attempts at optimization were closer to the minimum 75% accuracy. Perhaps fixing the hyperparameters may help optimize the model, but a very effective solution might be to collect additional data. With more data, there will likely be more features that can be used to truly optimize this model.