

**Overview:**

The nonprofit foundation Alphabet Soup wanted a tool to help them select applicants for funding. They need a binary classifier to predict whether applicants will be successful if funded by Alphabet Soup.

**Data Preprocessing:**

Unnecessary metrics such as EIN and Name were removed from the dataset and all remaining metrics were considered in the model. Both Classification and Application Type were features for the model.

- What variable(s) are the target(s) for your model?
- What variable(s) are the features for your model?
- What variable(s) should be removed from the input data because they are neither targets nor features.

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

Neural Network was used on each model and originally set with 2. For the final model, 3 layers were added that helped achieve an accuracy of over 75%. To achieve the model performance, I kept Name in the model and applied Name as a feature and binned the values. I kept classification as a feature in the model as well. In addition to the changes previously mentioned, I also added a third layer and changed the epochs to 200 instead of 100.

**Summary:**

Several layers should be considered, so that it can continue to predict and classify information based on the model.