

## **Overview of the analysis:** Explain the purpose of this analysis.

The purpose of the analysis for Alphabet Soup was to predict who would be applicants which the company would approve for investments. Using machine learning and neural networks to apply target/features on the dataset, I will create a binary classifier capable of predicting whether investors would be successful if funded by Alphabet Soup.

The csv file contains 34,000 organizations that have received funding from Alphabet Soup over the years and has 12 columns showing the metadata regarding each organization and funding outcomes.

## **Results:** Data Preprocessing

- What variables are the targets for your model?

IS\_SUCCESSFUL is the target that is marked 1 for successful while a 0 indicates an unsuccessful investment

- What variables are the features for your model?

The remaining columns not including EIN and NAME were the features for the model

- What variables should be removed from the input data because they are neither targets nor features?

EIN and Name were removed from the input data because they have largely irrelevant data

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

- How many neurons, layers, and activation functions did you select for your neural network model, and why?

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○ _____
○ Layer (type)          Output Shape          Param #
○ =====
○ dense (Dense)          (None, 80)            4000
○
○ dense_1 (Dense)         (None, 30)            2430
○
○ dense_2 (Dense)         (None, 1)             31
○
○ =====
○ Total params: 6461 (25.24 KB)
○ Trainable params: 6461 (25.24 KB)
○ Non-trainable params: 0 (0.00 Byte)
○ _____
○

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- Were you able to achieve the target model performance?
- What steps did you take in your attempts to increase model performance?