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

The nonprofit foundation Alphabet Soup wants a tool that can help it select the applicants for funding with the best chance of success in their ventures.

From Alphabet Soup’s business team, you have received a CSV containing more than 34,000 organisations that have received funding from Alphabet Soup over the years.

## **Results**: Using bulleted lists and images to support your answers, address the following questions:

* Data Preprocessing
  + What variable(s) are the target(s) for your model – IS\_SUCCESSFUL
  + What variable(s) are the features for your model – APPICATION TYPE AND CLASSIFICATION were features.
  + What variable(s) should be removed from the input data because they are neither targets nor feature - Dropped the non-beneficial ID columns, 'EIN' and 'NAME'.

## Compiling, Training, and Evaluating the Model

* + How many neurons, layers, and activation functions did you select for your neural network model, and why? – Various combinations of layers 2/ 3 with different neurons were attempted to optimise the model, yielding similar results of between 72 – 74% accuracy. Final attempt:
    - # X shape/ input feature/columns is
    - hidden\_node1 = 100
    - hidden\_node2 = 100
    - # Add a third hidden layer
    - hidden\_node3 = 50
  + Were you able to achieve the target model performance? I wasn’t able to achieve the target performance of 75%
  + What steps did you take in your attempts to increase model performance?
    - Increasing layers, Epoch, different activations, increasing number of nodes.

## Summary:

I surmise that a different classification model may be needed to further the performance.