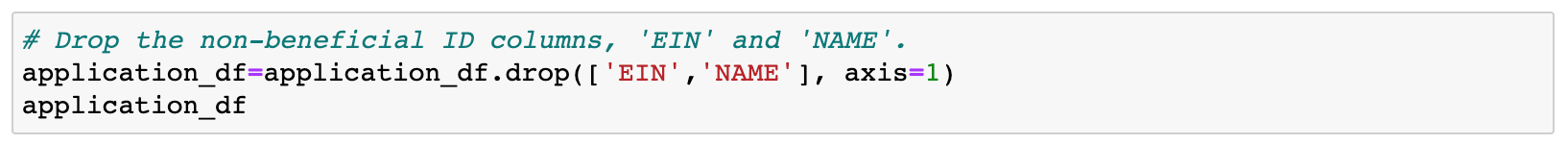
1. **Overview**
   * Alphabet Soup is a non-profit organization who would like to create an algorithm to determine the status of funding. Using the “Charity\_data.csv” that includes over 34,000 organizations, we will determine which organizations are more likely to succeed in receiving funding through creating neural networks.
2. **Results**:

* *Data Preprocessing* 
  + What variable(s) are considered the target(s) for your model?
    - Variables that lead to giving us our desired output – “IS SUCCESSFUL” column which is listed as “y” in the jupyter notebook
  + What variable(s) are considered to be the features for your model?
    - Input features – all columns once we transformed them from non-numerical values

Text

Description automatically generated

* + What variable(s) are neither targets nor features, and should be removed from the input data?
    - The non-beneficial columns – “Name” and “EIN”. Both were dropped from the data set



* *Compiling, Training, and Evaluating the Model* 
  + How many neurons, layers, and activation functions did you select for your neural network model, and why? 2-3 hidden layers were used regarding the multiple attempts. My goal was to add complexity to non-linear data. By training the model, chances of misclassification are lowered.
  + Were you able to achieve the target model performance? No, but the score was close, landing an accuracy rate of 0.72. The target model performance was 75%
  + What steps did you take to try and increase model performance? Not only did I add one more hidden layerto my second and third, but I made use of another commonly used activation of “Tanh”, which is similar to the “Sigmoid” function. Input features were increased and the number of epochs was decreased to see if it would give me a significant change in the score.

1. **Summary**: Summarize the overall results of the deep learning model. Include a recommendation for how a different model could solve this classification problem, and explain your recommendation.
   * All three attempts landed a score of 72%. The very last attempt when a different activation function was used, landed the highest score, which was closer to 73%.

Table

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