

This machine-learning algorithm aims to create an accurate model that will predict the likelihood of an applicant company being a successful venture. If it is accurate, a nonprofit will purchase it.

- For this model, the target variable was the column 'Is_Successful.'
- The following columns were the variables for my model:
"APPLICATION_TYPE_Other APPLICATION_TYPE_T10 APPLICATION_TYPE_T19
APPLICATION_TYPE_T3 APPLICATION_TYPE_T4 APPLICATION_TYPE_T5
APPLICATION_TYPE_T6 ... INCOME_AMT_1-9999 INCOME_AMT_10000-24999
INCOME_AMT_100000-499999 INCOME_AMT_10M-50M INCOME_AMT_1M-5M
INCOME_AMT_25000-99999 INCOME_AMT_50M+ INCOME_AMT_5M-10M
SPECIAL_CONSIDERATIONS_N SPECIAL_CONSIDERATIONS_Y"
- The variables dropped from this model were the 'EIN' and 'NAME' because they were neither targets nor features.
- I selected to use three layers with the following neurons:
 - Layer 1: 80
 - Layer 2: 120
 - Layer 3: 150
- I was not able to achieve the target model performance of 75%.
- To increase the model performance, I added an extra layer to my model and increased the overall neuron count to help improve the total number of parameters. I also changed the activation in the classification model to Relu since it was more efficient. Finally, I increased the number of Epoches in the model to get a higher accuracy score.

Overall, my model was able to achieve a 72.64% accuracy score. My recommendations for creating a more accurate model are to clean up the initial data, increase the number of epochs and neurons, and try different orders of activations in the layers.