Overview: This project involves a fictional nonprofit called Alphabet Soup which is seeking funding. For this assignment I was to incorporate machine learning and neural networks to select the applicants which had the greatest chance for funding.

Results:

Data Preprocessing :

What variables are the targets for your models?

Y = app_dummies[‘IS_SUCCESSFUL’]

What variable(s) are the features for your model?

X = app_dummies.drop(["IS_SUCCESSFUL"],axis = 1)

What variable(s) should be removed from the input data because they are neither targets nor features?

COLUMNS app‘EIN','NAME'

Compiling, Training, and Evaluating the Model

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

For the first hidden layer I used 50 neurons

For the second hidden layer I used 45 neurons

I wanted my number of neurons to be smaller than the input, but as for why I choose 50 and 45, I was simply guessing.

Were you able to achieve the target model performance?

No

What steps did you take in your attempts to increase model performance?

Adding more layers

Summary

I was unable to get the predictive accuracy for the models higher than 73%. The use of Alternative Activation Models May help.