REPORT ON DEEP LEARNING MODEL

Overview

This analysis aims to evaluate the performance of the deep learning model created for the non-profit foundation Alphabet Soup. The model classifies funding applications as successful or not successful.

Results

The Target Variable for this model is "IS_SUCCESSFUL"

The Feature Variable for this model is "Classification" or "affiliation"

Number of neurons:

First hidden layer: 300 neurons
Second hidden layer: 200 neurons
Third hidden layer: 100 neurons

Number of layers:

Input layer: 1 layer (input_dim = 45)
Hidden layers: 3 layers
Output layer: 1 layer

Activation functions:

Hidden layers: ReLU (Rectified Linear Unit)
Output layer: Sigmoid

after adjusting multiple parameters I found that these produced the best results for me at accuracy: 0.7301

My model did not reach the desired level of accuracy which was 75%

Summary

The overall performance of the deep learning model developed for Alphabet Soup is determined based on its ability to classify funding applications accurately. While the specific performance metrics are not mentioned in the report, it is clear that the model did not achieve the desired target model performance of 75% accuracy.

a recommendation that I have would be to use random forests for a model like this. random forests can handle a mix of numerical data as well as categorical features