Overview

The purpose of this analysis is to predict if applicants funded by the Nonprofit Alphabet Soup would be successful in being able to select the correct applicant. For this, machine learning and neural networks are used to create a reliable model to achieve this.

The feature variables in this model are application type and classification to preprocess the data for the model. The is successful is the variable that we want to predict, the targeted variable. The rest of the data is still used in the model but does not qualify as targets or features.

I selected 20 neurons in layer 1 and 10 in layer 2 because I tried 25 \*half of the data size) and 13 for layer 2 (~½) of layer 1). The outcome was about 73% so I tried another model. I decreased it to 15 (layer 1) and 8 (layer 2). Then, 20 and 10 and they all gave a model accuracy of ~72%

The model gives a result of

322/322 - 1s - loss: 0.5586 - accuracy: 0.7292 - 650ms/epoch - 2ms/step

Loss: 0.5586373805999756, Accuracy: 0.7291545271873474

Therefore, this model is not accurate enough to predict whether applicants will be successful if granted money by the organization. Having ¼ of the probability for the model to fail is too high to trust with a large amount of money invested. The model does not improve much when changed the amount of neurons used in the layers.