

EVALUATION:

The target variable for the model is IS_SUCCESSFUL. This is evident because it's a binary variable.

The features for the model are all the variables in the dataset except IS_SUCCESSFUL.:

APPLICATION_TYPE
AFFILIATION
CLASSIFICATION
USE_CASE
ORGANIZATION
STATUS
INCOME_AMT
SPECIAL_CONSIDERATIONS
ASK_AMT

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

Layers: I chose a model with three layers: two hidden layers and one output layer.

Neurons:

Input Layer:

Hidden Layer 1: I selected 80 neurons. I googled reasonable starting points

Hidden Layer 2: I selected 30 neurons. Reducing the number of neurons in the second hidden layer.

Output Layer: I have 1 neuron in the output layer, which is appropriate for binary classification

Activation Functions:

Hidden Layers: I used the ReLU (Rectified Linear Unit) activation function (activation="relu") for both hidden layers. I used the most commonly used function in class first.

Output Layer: I used the sigmoid activation function (activation="sigmoid") for the output layer. I chose this because it was the other most used function in class but was different. Also i was able that it was good for a binary option.