Neural Network Model

Overview:

Alphabet Soup wants to know if applicants for funding will be successful. The provided dataset, we must develop a machine learning model that can predict whether applicants will be successful or not.

Results:

We first removed irrelevant information about the remaining columns that were to be considered in the model after dropping EIN and NAME. The data was split into training and testing sets. Target variable was labeled IS\_SUCCESSFUL and given value 1 for yes and 0 for no. Many data points were used as cutoffs to bin rare variables along the value of Other for each value.

Compiling, Training, and Evaluating the Model:

A screenshot of a computer

Description automatically generated with medium confidence

A screenshot of a computer code

Description automatically generated with low confidence

A total of 477 parameters were made by the training model. First attempt was slightly over 73% accuracy and that was under the 75% desired accuracy.

Optimization:

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Description automatically generated with medium confidence

A screen shot of a computer code

Description automatically generated with low confidence

3298 parameters were conducted and now there was a 79% accuracy over the previous model. 4% above the 75% desired rate shows that more layers and parameters yield more accuracy.