Model Report

Overview:

The purpose of this analysis was to create a model that could predict the success rate of applicants if funded by Alphabet Soup. The model is designed to predict whether an applicant will be successful by targeting variables such as amount requested, company income, and company class.

Data Processing:

The success rate, a binary variable, was the target for this analysis, either it was or was not successful. The features included bins of income level, money requested, and company classification number. Three models were created with slight variance to each to improve accuracy, although accuracy above 65% was not achieved. The variance included changing the number of bins, hidden layers, and variables featured.

Results:

The best model result had a 67% accuracy rating, and the worst had a 53%. The best model took the bottom 40% of value counts and binned them into “other” but also featured each possible variable. When I took the bottom 60% or only the bottom 20%, the accuracy went down. The best model also had 3 hidden layers instead of 2. It is possible with further research to test how many layers would give the best accuracy along with how many units should be used.