Module 21 Challenge Analysis

The main purpose of this homework assignment is to help a nonprofit organization, Alphabet Soup, select applicants for funding with the best chance of success in their ventures. We will use machine learning and neural networks that can predict whether applicants will be successful if funded by Alphabet Soup.

In the first model we started with preprocessing the data and dropping the NAME and EIN columns and analyzed classifications and application types which means the other columns were features. I split, tested, and trained the datasets by setting the epochs to 50 and then evaluated the model to determine its accuracy which was at 0.7269.

We wanted to optimize the model even further to get accuracy above 75%. So, in this model we only dropped the EIN column and analyzed classifications, application type and name columns. We split, tested, and trained the dataset and added an additional hidden layer to gain more accuracy with this model. We trained the model with 50 epochs and when we evaluated the accuracy we reach our goal of getting over 75% with the model accuracy being 0.7904.