Purpose of analysis

Create a model that has an acceptable accuracy in matching applicants with funding opportunities. This model will be a binary classifier meaning it can predict whether applicants will be successful on receiving funding.

Data Processing

Starting off, dropped non-relevant columns us as 'EIN', 'SPECIAL_CONSIDERATIONS', and 'ASK_AMT'.

Finding the number of data points for columns.

Compiling, Training, & Evaluating the Model

Converting categorical data into numeric by using 'pd.get_dummies()' and then divide the data into target and feature array.

The 'train_test_split' method is to test and train the dataset. A Standard Scalar was made for the 'X_training' variable and transformed.

The model was defined by number_input_features, over three hidden nodes layers and outer nodes layer to provide a model summary.

Model was evaluated using the evaluate method.

Summary

Initial model had a 73% accuracy, to optimize the model accuracy needed to increase to 77%. The following was adjusted:

- Dropping 3 columns, instead of 2.
- Another bin for 'NAME' column for any rare occurrences.
- Four hidden layers was added for the data can be filtered properly.
- All of the layers had the 'sigmoid' activation function.
- Model optimizer was used for compiling by using 'adamax' and reducing batch size to 10