Written Report

The purpose of this analysis is to predict the success of charitable donations using a dataset containing information about different charities. First off, we will preprocess the data, then train a deep neural network (DNN) model to predict donation success as well.

Part 1: involves preprocessing the data by handling categorical variables. We replace infrequent values in the 'APPLICATION_TYPE' column with 'Other' to minimize the number of unique categories. Moreover, we split the preprocessed data into training/testing datasets. As shown in class, I chose to go with the 70% and 30% separation in the dataset when evaluating the model.

Part 2: The relevant Deep Neural Network Model consists of 3 layers alongside a model compilation using binary crossentropy loss and the Adam optimizer. Furthermore, this model is being trained on 100 epochs, which typically results in improved fine tuning and generalization.