Documentation

Dependencies:

Sklearn
Tensorflow
Numpy

How to run:

To run the program simply execute the python file, recommended in console and not in IDLE

Program gives two options

1. To retrain both both algorithms and save their models(name of model can be changed in code or it will re-wright the model files)
2. To load models, look at their summary and check accuracy using the test data set

Details of implementation:

The first part of the code loads in the digit data set from sklearn and splits it into test and training sets.

1. In function trainNSave() the models for the two neural networks are created in the keras.sequential brackets where the layers are added. The main difference between the two models is the conv layer followed by a flatten layer.

   The models are saved using model.save() which saves the file as a h5 file containing all the weights of the layers.

   For both models the testing data set is also fitted onto the model after it has been trained to show accuracy, which is printed

2. In the function loadNDisplay() both models are loaded in and the stats are displayed. They are then both tested against the testing data set to show for accuracy