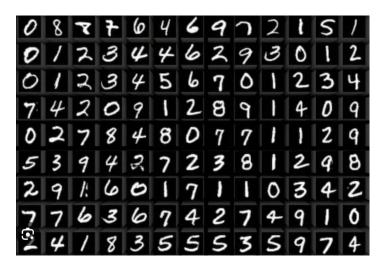# Practical Project 2

Classification

1. Consider the "MNIST" dataset, (in "csv" format) available at "Kaggle.com" (https://www.kaggle.com/datasets/oddrationale/mnist-in-csv).

   The "mnist_train.csv" file contains the 60,000 training examples and labels.

   The "mnist_test.csv" contains 10,000 test examples and labels.

   Each row consists of 785 values: the first value is the label (a number from 0 to 9) and the remaining 784 values are the pixel values (a number from 0 - black to 255 - white), in the original 28 x 28 image.

Implement a "binary_classification.py" Python + Keras script that contains a model (simple feed forward neural network), able to distinguish between the "0".."9" classes in this dataset. This script should receive as parameter the topology of the desired model (e.g., "53" refers to a network with 3 layers

   - 5 neurons in the input layer
   - 3 neurons in a hidden layer
   - (and 10 neurons in the output layer, which will correspond to the number of classes)

Hint: Consider the following tutorial/resource, as a guided implementation https://pyimagesearch.com/2021/05/06/implementing-feedforward-neural-networks-with-keras-and-tensorflow/