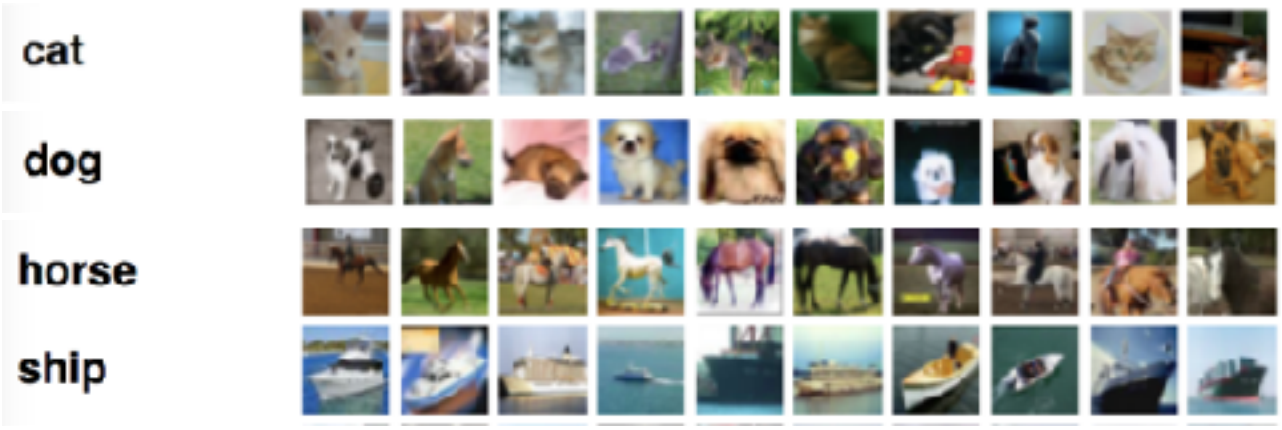
MPL

Rotem Israeli - 206912222
Eliran Amzaleg - 205484900
Yakir Arie - 205387491

In this assignment we tried to do better result on the same dataset used by using multi-layer neural network.
The dataset used is 10000 32x32x3 color images of cat,dog,hourse,ship (2500 of each class)



The first layer's size is 3072 (the input size, 32*32*3 = 3072)
The second layer's size is 2048
The third layer's size is 1024
The fourth layer's size is 512
The last layer is the output size - 4.

After 4 epochs the accuracy is 82.6%
In comparison the last assignment's model accuracy is 67%

The other attempts the model didn't get good accuracy because we trained the model on 500 images for each class and the model starts to memorise the train samples.
We recognise that the model is to much memorise the train images and less understand what differ one class to another by seeing the train error decreasing but the test error don't.

Other fail was underfitting because of compute power.
We trained the model for only one epoch so it didn't learn enough.
We also tried model with only one layer beside the input layer and output layer and the model did slightly worse.