Part 1：

1. Done
2. Done
3. Done
4. In the imagenet.c file, the load\_target function is used to identify which is the target to recognize. It is set to compare userid with ‘glickman’ before to identify user glickman. But now, I have changed it to compare eyes with ‘open’ to judge if the person wear sunglasses or not.

Code:

if (!strcmp(eyes, "sunglasses")) {

net->target[1] = TARGET\_HIGH;

} else {

net->target[1] = TARGET\_LOW;

}

The maximum classification accuracy achieved on the training set is 100. And it takes 75 epochs to reach this level. For validation set: accuracy: 94.2308 Train set: accuracy: 97.0588.

1. Done
2. Done
3. evaluate\_performance(net, err), load\_target(img, net), backprop\_face(trainlist, test1list, test2list, epochs, savedelta, netname, list\_errors) have been modified.

And I add the computational result of neutral network for recognizing face into the output. Besides, the final result of accuracy and error are also added into the output.

Maximum classification accuracy:97.2222 and 100 epochs are used to reach this level. Validation set: 95 Test set:100

Failed to classify the following images from the training set:

Failed to classify the following images from the test set 1:

an2i\_straight\_neutral\_open\_4.pgm - outputs 0.271

Failed to classify the following images from the test set 2:

an2i\_straight\_happy\_open\_4.pgm - outputs 0.250

tammo\_straight\_neutral\_sunglasses\_4.pgm - outputs 0.771

These images are all have the same pose straight and could be neutral or open.

1. Done
2. Done
3. I add the computational result of neutral network for recognizing the pose into the output. And the final result of accuracy and error for test sets are added into the output.

Maximum accuracy on training set: 100. It takes 39 epochs to reach this level. Trainset 1: 84.8921. Trainset 2: 92.3077.

1. Done