MSBD 6000B Project2

Name: LI Linrui
ID: 20475457

Pre-processing:

Due to the size of pictures is different, so firstly, I resize the size of every picture and make them have the same size. I print all the size of every picture and check the range of the pictures and try the size 32*32, 64*64 and 128*128, and find setting the size of picture to 32*32 has better performance on testing data. Although after resizing, some of them will be stretched vertically or horizontally, but it is not a problem, because the differences in aspect ratios are not that large. Person can recognize the images when they're stretched then the model should be able to do so as well.

Model:

1. Convolutional layer
   4 * [5 * 5] kernel +tanh + max pooling
2. Convolutional layer
   5 * [5 * 5] kernel +tanh + max pooling
3. Fully connected layer

Where loss function is softmax cross entropy, optimizer is Adam

Validation Accuracy: 46%

Having a not good accuracy, I tried to add more Convolutional layers, but it did not work remarkablely.