## Introduction of the programs in this folder

To run the programs in this folder, you need to download the data from the links given in my report, and change the data path in each file. Meanwhile, your computer has to support python 3.6 and installed Tersonflow 1.4.

1. In the folder named MNIST, there are two folders. Inside these two folders, there are some programs which are developed in each of the scenario. For example, the file Scenario_1.py in folder Convolutional Neural Network models is the code of the Scenario 1 described in report in Chapter 2.

2. In the folder named CIFAR-10, the file CNN_model_reproduced_from_paper.py is the code for the benchmark. And the CNN_model_for_CIFAR_10.py is the final model we build for classifying CIFAR-10 images.

3. In the folder named Other Programs, save_images_into_seperated_files.py is the program I developed to extract the pictures from numpy dataset and store them in to x.jpg format separately. The model from paper resized the images from 32*32 to 272*272, we did this too and use this program to extract and store them. The file draw_figure.py is for drawing the curves of accuracy and loss. Creating this program is because when we realized that using max accuracy and min loss to evaluate the performance is too weak, we need to get all of the experiments results and calculate the average values of accuracy. However, since the program is running in a server, we have to let the result print in the screen and copy them into my laptop and draw the plots. The data inside this file is the results of the CNN model on CIFAR-10 dataset.

4. Report in LaTeX is for the readers who think the images in PDF version is too small and want to see them more clearly.