## Errors/Issues

1. Change Labels of dataset to n-1
2. Import error openCV
3. RuntimeError: CUDA error: device-side assert triggered
   1. <https://stackoverflow.com/questions/51691563/cuda-runtime-error-59-device-side-assert-triggered>
   2. <https://towardsdatascience.com/cuda-error-device-side-assert-triggered-c6ae1c8fa4c3>

This error occurs due to the following two reasons:

* Inconsistency between the number of labels/classes and the number of output units
* The input of the loss function may be incorrect.

1. 'NeuralNetwork' object has no attribute 'Softmax' pytorch
2. RuntimeError: mat1 dim 1 must match mat2 dim 0
3. TypeError: Invalid shape (3, 28, 28) for image data
   1. plot (3, 28, 28) image python
   2. RuntimeError: stack expects each tensor to be equal size, but got [3, 28, 42] at entry 0 and [3, 29, 28] at entry 1
4. read image in torch
5. IProgress not found.
6. Showing 3\*3 grid of the same image of Pytorch tensor
   1. <https://stackoverflow.com/questions/62541192/display-pytorch-tensor-as-image-using-matplotlib>
   2. <https://stackoverflow.com/questions/53623472/how-do-i-display-a-single-image-in-pytorch/55196345>
   3. <https://discuss.pytorch.org/t/swap-axes-in-pytorch/970/3>

Solution:

image.permute(1, 2, 0)

## Target/Challenges

1. Read custom image dataset
2. Make batch of custom image dataset
3. Determine the size of layers
   1. Input image size
   2. Output image size
   3. Number of hidden layers
4. Visualize flatten image
   1. <https://deeplizard.com/learn/video/mFAIBMbACMA>
5. Visualize each layer of CNN