**Mid-Term Report**

**Submitted by:**

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In this project, we performed image-classification, one of the shining features of Deep Learning. We used Pytorch, which is very unique.

**Organizing Data:**

* Pytorch expects the data to be organized in folders divided into training, validation and testing with folders of each class.
* This organizing is done using a python script ‘split.py’ whish divides the given training dataset into required format of data structure. i.e.,

data/

train/

gossiping

isolation

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Valid/

gossiping

isolation

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test/

gossiping

isolation

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* We prefer using GPU in the interest of faster execution, but it can also be done on CPU.
* Model is constructed using Five Convolutional layer:

**Conv-1:** The First convolutional layer consists of 96 kernels of size 11\*11 applied with a stride of 4 and padding of 0.

* **MaxPool-1**: The maxpool layer following Conv-1 consists of pooling size of 3\*3 and stride 2.
* **Conv-2**: The second conv layer consists of 256 kernels of size 5\*5 applied with a stride of 1 and padding of 2.
* **MaxPool-2**: The maxpool layer following Conv-2 consists of pooling size of 3\*3 and a stride of 2.
* **Conv-3**: The third conv layer consists of 384 kernels of size 3\*3 applied with a stride of 1 and padding of 1.
* **Conv-4**: The fourth conv layer has the same structure as the third conv layer. It consists of 384 kernels of size 3\*3 applied with a stride of 1 and padding of 1.
* **Conv-5**: The fifth conv layer consists of 256 kernels of size 3\*3 applied with a stride of 1 and padding of 1.
* **MaxPool-3**: The maxpool layer following Conv-5 consists of pooling size of 3\*3 and a stride of 2.
* This is the model and it is trained on ImageNet dataset of humans and this model is used as a pretrained model to train on cyber-bullying dataset.