Code Documentation

This Readme explains code base used for the Intro to Pattern recognition Project. The codebase consists of folders each aptly named for what they contain. All ‘ipynb’ files are edited using Jupyter Notebook.

Required Libraries to Run:

* Tensorflow
* Keras
* Import\_ipynb – Allows us to import other ipynb files.

Folder Structure:

* Datasets – this folder contains the datasets that we have used in a rar file. The original MNIST dataset is directly loaded from keras. There is another notebook that is named dataset\_generation which contains the code and implementation of how we generated the required datasets.
* Results – this folder contains the excel sheets containing results for all models. Details of all metrics are arranged based on the algorithm
* All other folders are based on the algorithm used for training. Each folder may contain a pipeline folder that contains all main functions needed to train the dataset. Then we have subsequent notebooks that contain details about importing these functions with the help of ‘import\_ipynb’ and the datasets and training them. The exception to this method is LDAM and proposed dl where the pipeline and training are merged into a single notebook.
* The subsequent notebook named after datasets do the following: Import the dataset , preprocess them and train them using the pipeline’s function.
* If there are any doubts regarding the structure and running of code, please do not hesitate to contact us. Email: [Rahul.mohan28@gmail.com](mailto:Rahul.mohan28@gmail.com)
* Note: since we are importing datasets , the paths might be different in the system, if there is an issue with importing either the pipeline or the dataset,please update the path as necessary.