**Multiple Source Domain Adaptation Problem (Repository: UFDA-Experiment1)**

We need 4 datasets in total: mnist, mnist\_m, svhn and SynthDigits

1. For downloading and converting mnist dataset to pickle format, simply run Python3 mnist2pkl.py. This creates a data folder and downloads mnist dataset to it, and converts the dataset to pkl format.
2. For mnist\_m dataset, download BSR\_bsds500.tgz from <https://www2.eecs.berkeley.edu/Research/Projects/CS/vision/grouping/BSR/>

Place it in the root MSDA folder, and run Python3 create\_mnistm.py

1. Move mnistm\_data.pkl to the /data folder
2. Copy cropped digits for the SVHN dataset in .mat format from <http://ufldl.stanford.edu/housenumbers/>

And place in data/SVHN folder. Then run python3 generate\_SVHN.py in the root folder.

1. Copy the SynthDigits dataset from <https://drive.google.com/file/d/0B9Z4d7lAwbnTSVR1dEFSRUFxOUU/view>

into the data/SynthDigits folder. Then run python3 generate\_SynDig.py

1. After ensuring that all the four pickle files are in the data folder, run python3 main.py. Set mnist or mnistm as the target domain in line 28 of the code. The last dataset in the list is treated as the target.
2. When the code runs, list d\_acc gives the accuracy for the individual source domains, for each round, while target accuracy is determined after every 50 rounds and displayed.