**A Deep Hybrid Pooling Architecture for Graph Classification with Hierarchical Attention**

This is a tensorflow based implementation of Hybrid Pooling as discussed in the paper.

**Dataset:**

1. The dataset\_graph folder contains all the datasets which we used in experiments of graph classification.

**How to run:**

**1) For Graph Classification:** (Default dataset is set to MUTAG)

python graph\_classification.py

**Requirements:**

1) python (version 3.6 or above)

2) tensorflow (version 1.14)

3) networkx

4) keras

5) numpy

6) pickle

7) scipy

8) pandas

9) collections

**Parameters:**

**1) For Graph Classification:**

dataset: The name of the dataset

epoch: Number of epochs to train the model

learning\_rate: Learning rate

embd\_dim: Final Embedding dimension

gcn\_layer: Number of GCN layers

gcn\_dim: GCN Embedding dimension

dropout: Dropout rate

batch\_size: Batch size

We can specify these parameters while running python file.

For eg: To specify any other dataset, run following command:

python graph\_classification.py --dataset NCI1