Assignment 3

COMP 599: Network Science

Due on October 21st 2022

Can be submitted individually or in groups of up to two (recommended).

1. Compare performance of 2 (or more) **node classification** algorithms on the following datasets, i.e. apply the algorithms to predict the labels of the nodes, for all results report average and variance over 10 runs. [50%]

   - real-node-label: citeseer, cora, pubmed
     You can use or ignore the feature matrix based on the algorithm, use the same split for test and train as the GCN paper

2. Compare performance of 2 (or more) **link prediction** algorithms on the same set of data. [50%]
   Here, drop 20% of edge at random, and report the AUC (average over 10 runs). Similar to previous part, you can ignore or use features/labels depending on the algorithm.

bonus using an algorithm proposed in the last 5 years [10% for each task]

bonus including the ogbn-arxiv dataset from `https://ogb.stanford.edu/docs/nodeprop/` [5% for each task]

Feel free to use any package or code off-the-shelf, or implement your own algorithm, measures.
Submit the report in pdf and code as separate attachments, through Mycourses.