Assignment 3

COMP 599: Network Science

Due on October 18th 2021

1. Compare performance of 2 (or more) **node classification** algorithms on the same datasets as assignment 2, i.e. apply the algorithms to predict the labels on nodes of the following graphs: (for all results report average over 10 runs)

   - real-classic: strike, karate, polblog, polbooks, football [30%]
     For these datasets, randomly drop the labels and report the accuracy as a function of the portion of the labels that are dropped, from 95% to 5%

   - real-node-label: citeseer, cora, pubmed [50%]
     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 [same scoring proportions as part1]. Here, drop 20% of edge at random, and report the AUC (average over 10 runs). For node attributed datasets, you can ignore or use features/labels depending on the algorithm.

bonus the best performing algorithm in each task [10%]

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.