Final Project

- Due: 2025/01/09 11:59 pm
  - Upload your code and report to eeclass before the deadline
- A group with 2 people (at most 1 group can have 1 or 3 people)
  - Effort per person will be involved in the evaluation metric
- Goal: design algorithms to improve effectiveness and efficiency for the following graph optimization problem
- Evaluation matric
  - Objective value on a private dataset (40%)
    - Infeasible solution will get zero score for this part
  - Running time on the above private dataset (10%)
  - Report (50%)
    - In PDF format (with yours ID on filename)
    - Evaluation based on the algorithm design & report completeness
    - Involving your division of work in the report

Targeted Graph Optimization Problem

- Given
  - A social network $G = (V, E)$
  - A set of targets T
  - The number of edges to be added k
  - The LCC degradation threshold τ
  - The lower bounds of betweenness, closeness, and degree $\omega_b,\ \omega_c,\ \omega_d$
- Find k new edges F to be added, such that
  - $\max_{t \in T} LCC(t)$ is minimized
  - For all v, the increment of LCC $< \tau$
  - For all t, the betweenness, closeness and degree > $\omega_b,\ \omega_c,\ \omega_d$