Task 8

CLUSTERING OF SOCIAL-NETWORK GRAPHS

Local clustering coefficient:

- quantifies how close the neighbours of a node are to being a clique (complete graph)
- proportion of links between the nodes within its neighbourhood divided by the number of links that could possibly exist between them.

$$C_i = \frac{2n}{k_i(k_i-1)}.$$

- undirected

$$C_i = \frac{n}{k_i(k_i-1)}.$$

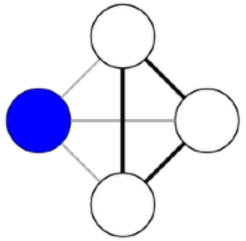
- directed

$$\bar{C} = \frac{1}{n}\sum_{i=1}^{n} C_i.$$

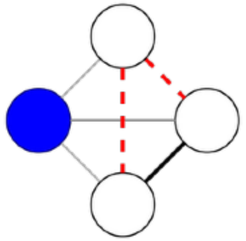
- Network Average Cluster Coefficient

Task 8

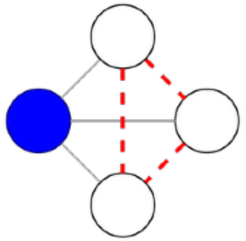
LOKALER CLUSTERKOEFFIZIENT



c = 1



c = 1/3



c = 0

$$C_i = \frac{2n}{k_i(k_i-1)}.$$

- ungerichtet

$$C_i = \frac{n}{k_i(k_i-1)}.$$

- gerichtet

$$C_i = \frac{\text{Anzahl der Dreiecke verbunden mit Knoten } i}{\text{Anzahl der „verbundenen Tripel“ zentriert an Knoten } i}$$

$$\bar{C} = \frac{1}{n}\sum_{i=1}^{n} C_i.$$

- Network Average Cluster Coefficient