

SOLUTION TO QUESTION-1:

Dataset Chosen: email-Eu-core

Number of nodes: 1005

Number of edges: 25571

Average in-degree: 25.443781094527363

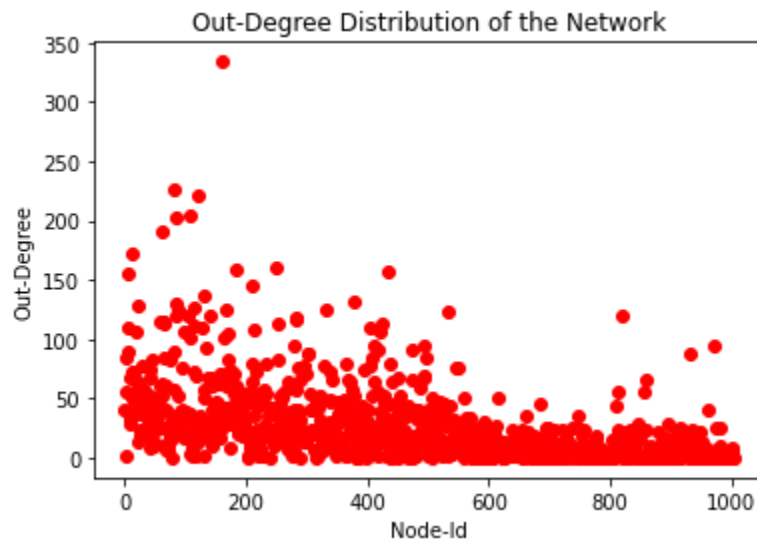
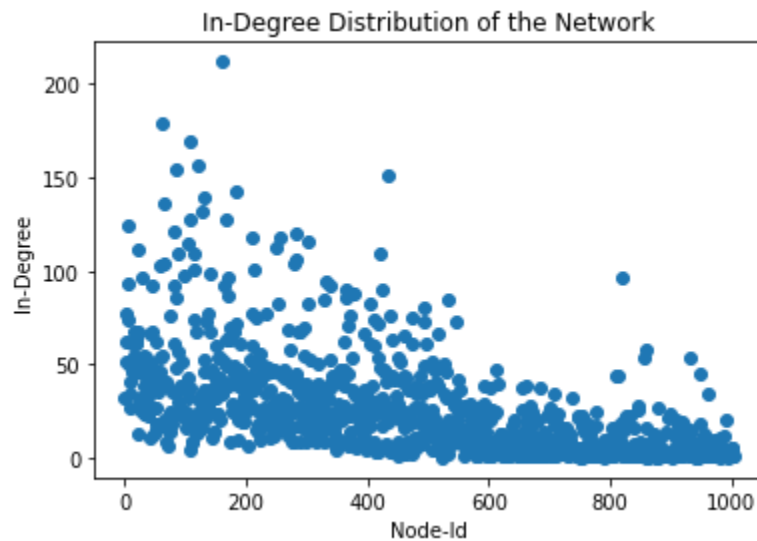
Average out-degree: 25.443781094527363

Node with max in-degree: 160

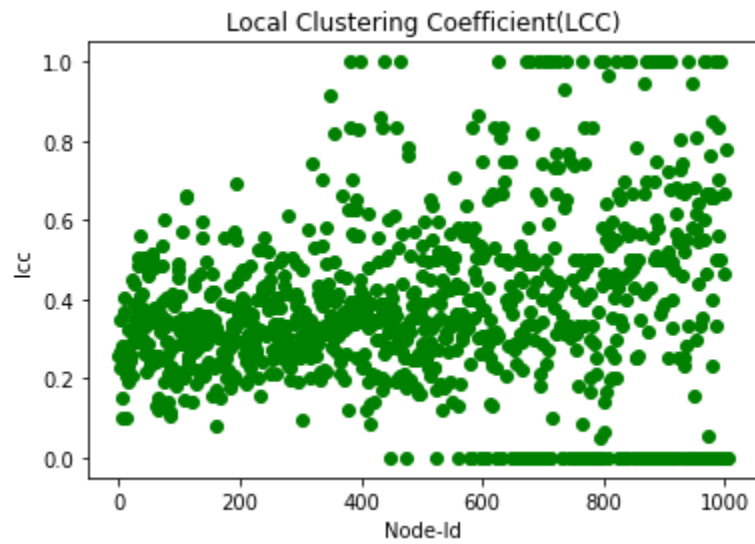
Node with max out-degree: 160

The density of the graph: 0.025342411448732432

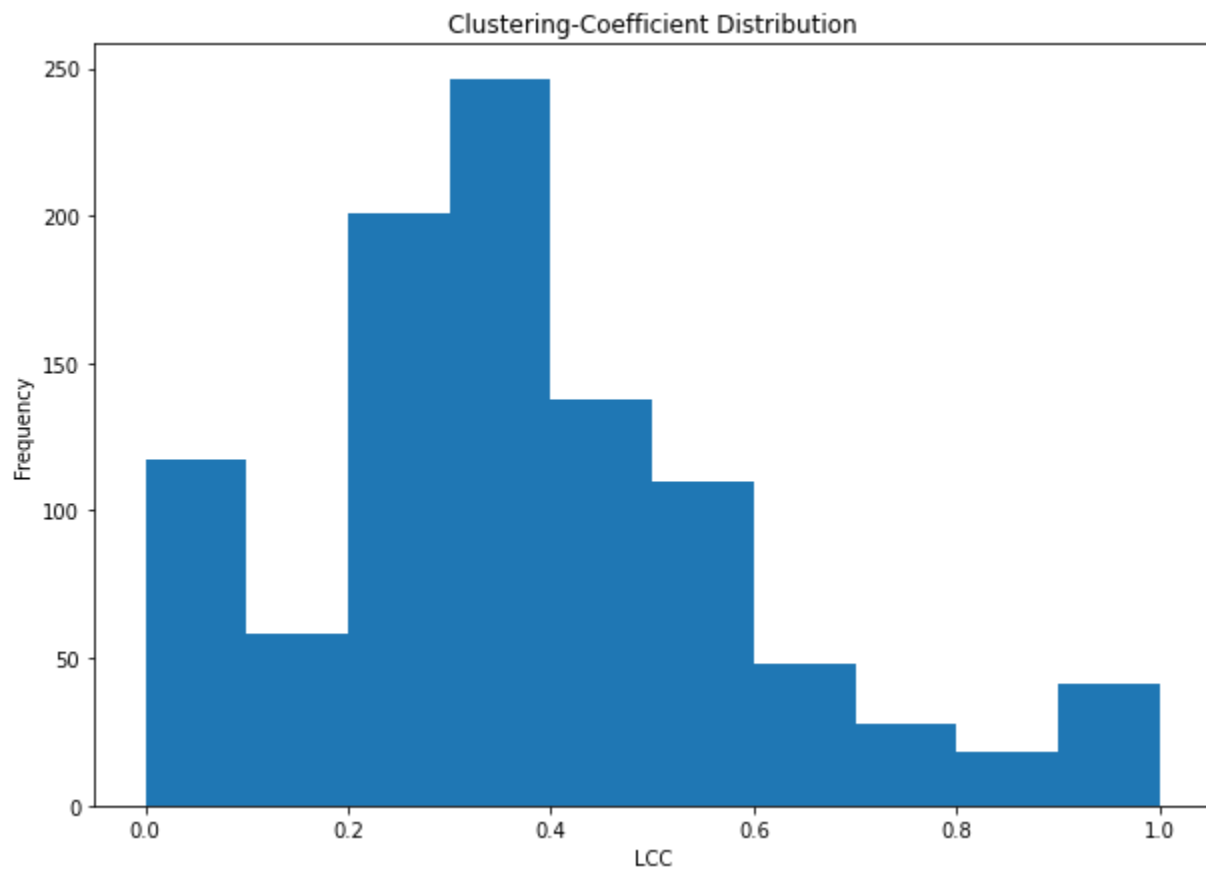
Degree distribution of the network:



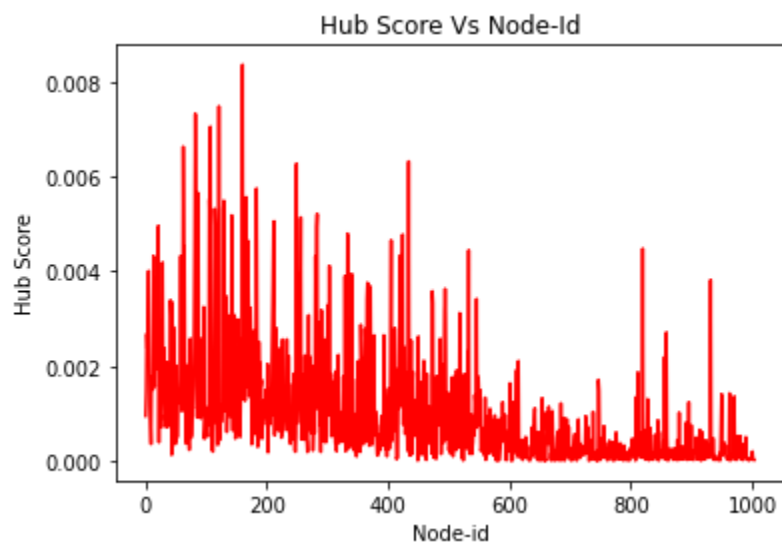
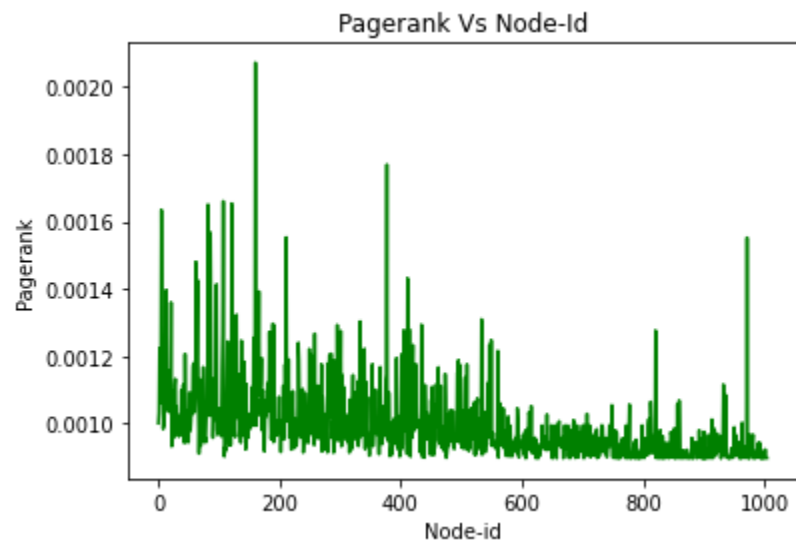
Local clustering coefficient of each node

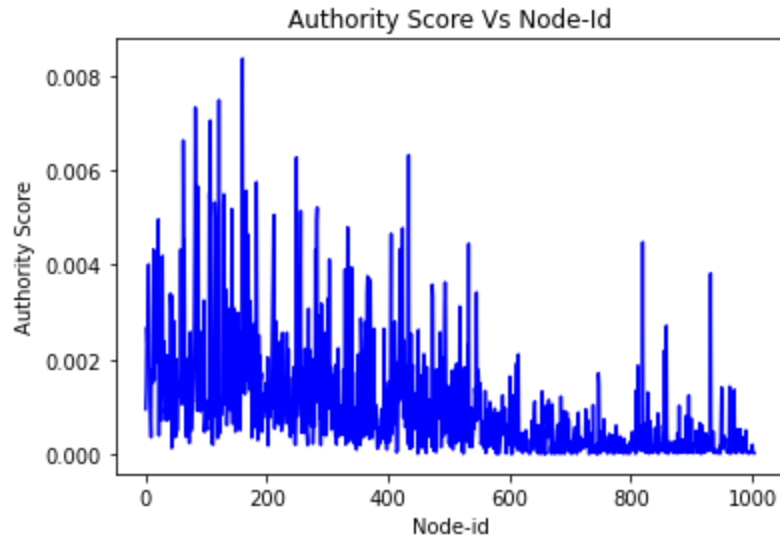


Clustering Coefficient Distribution



SOLUTION TO QUESTION-2:





It is observed that nodes with higher pagerank scores happen to have higher authority and hub scores. In our graph, nodes with high pagerank score are not only good authorities as expected but also good hubs.