NETWORK PROPERTIES OF GRAPHS

1.DEGREE DISTRIBUTION:(implemented)

The degree distribution *P*(*k*) of a network is then defined to be the fraction of nodes in the network with degree *k*.

2.CLUSTERING COEFF DISTRIBUTION:(implemented)

The **average clustering coefficient distribution** gives the average of the clustering coefficients for all nodes *n* with *k* neighbors for *k = 2,…*

*3.BETWEENNESS CENTRALITY:(implemented)*

It is equal to the number of shortest paths from all vertices to all others that pass through that node. A node with high betweenness centrality has a large influence on the transfer of items through the network, under the assumption that item transfer follows the shortest paths.

4.CLOSENESS:(implemented)

Closeness centrality is defined as the total graph-theoretic distance to all other nodes in the network.. The bigger the number the LESS central they are (because they are farther away from everyone).

5.CONSTRUCTION OF EQUIVALENT RANDOM GRAPHS:(implemented)

Same no of edges and vertices. - Using Erdos Renyi model for random graphs

references :

<http://med.bioinf.mpi-inf.mpg.de/netanalyzer/help/2.6.1/>

<http://www.analytictech.com/mb021/graphtheory.htm>

[https://en.wikipedia.org/wiki/Erd%C5%91s%E2%80%93R%C3%A9nyi\_model](https://en.wikipedia.org/wiki/Erdős–Rényi_model)