Network Information & Vizualization

Network Properties
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Total Nodes:	1006.0
Total Edges:	4525.0
Diameter:	5.0
Density:	0.009
Average Degree:	4.498
Characteristic Path Length:	3.14

Tolerance

Attack

3.3 %

Failure

21.4 %
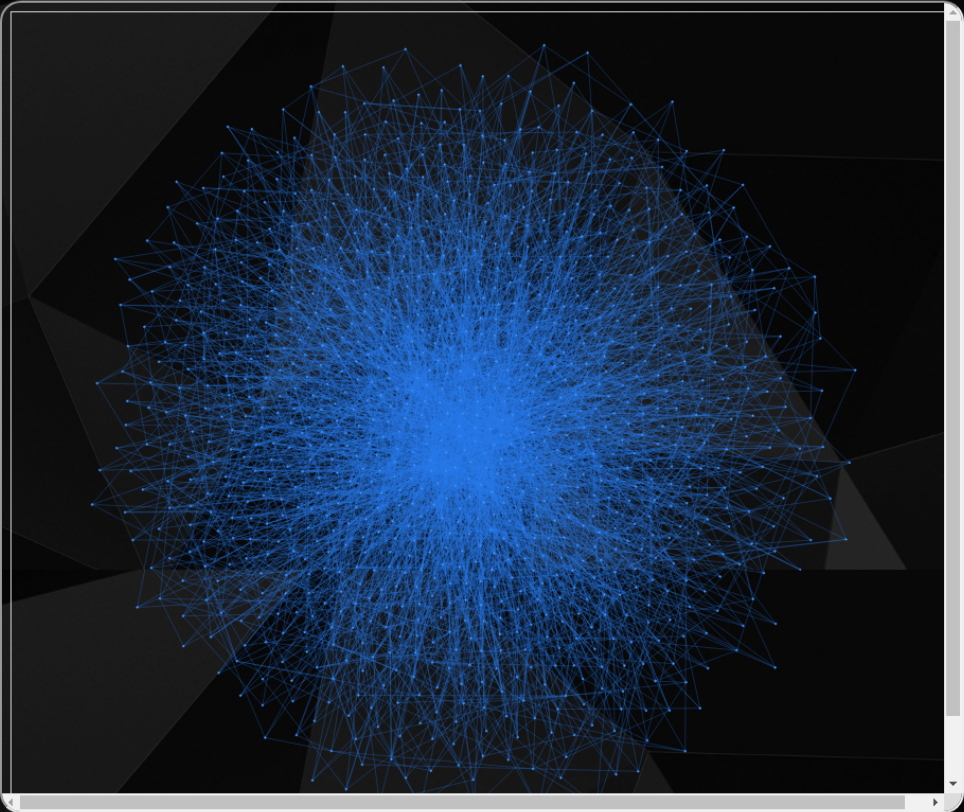
Most Crucial Nodes

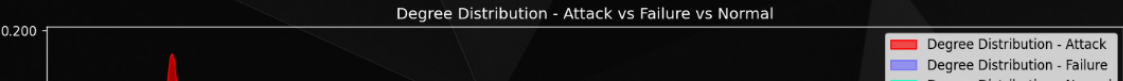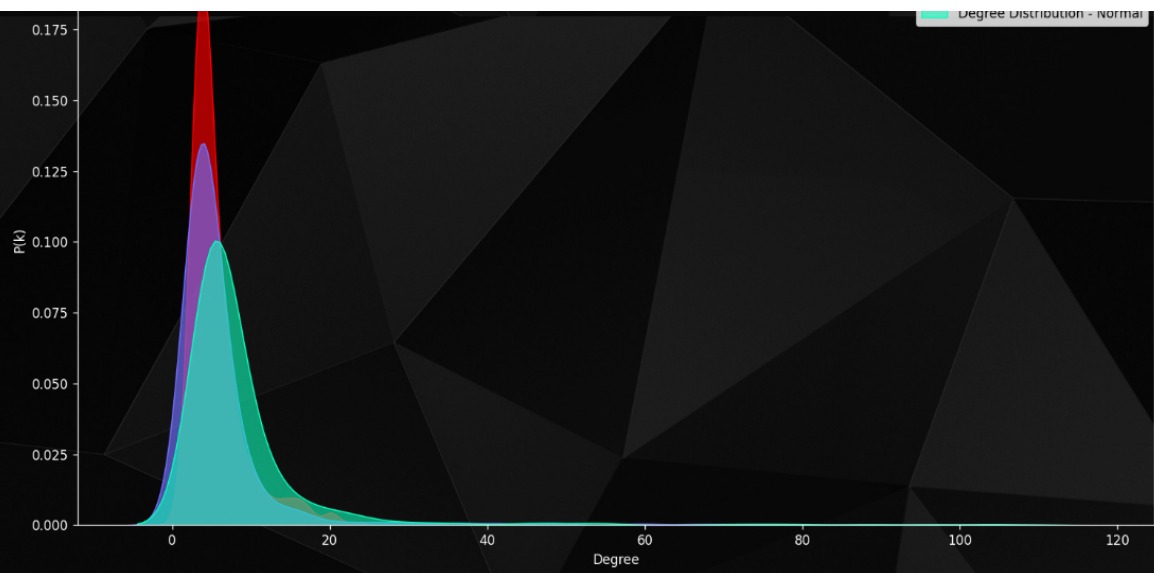## Based on Degree

6_back   6   10_back

10   7_back

Based on Betweenness Centrality
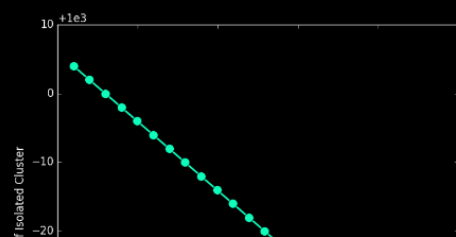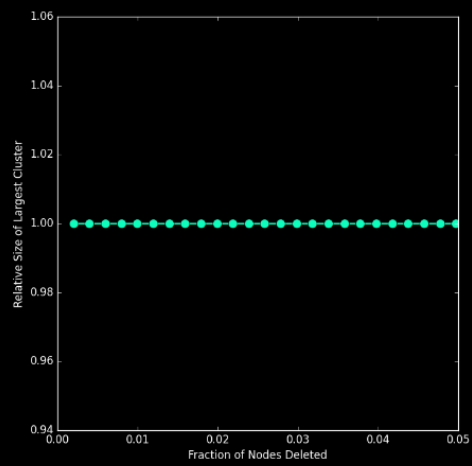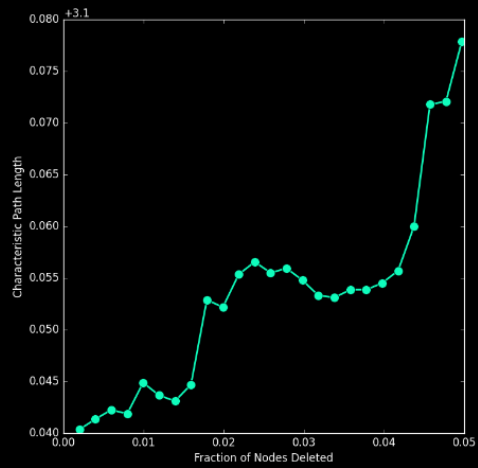
6_back   6   10_back
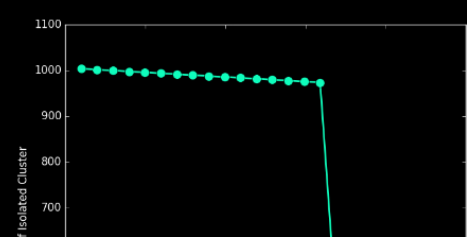
7_back   10

Error & Attack Tolerance Analysis

Degree Distribution - Attack vs Failure vs Normal

0.200

■ Degree Distribution - Attack
■ Degree Distribution - Failure
■ Degree Distribution - Normal

P(k)

Degree

Failure Analysis

Characteristic Path Length

Fraction of Nodes Deleted

Relative Size of Largest Cluster

Fraction of Nodes Deleted

of Isolated Cluster

Attack Analysis

Characteristic Path Length

Fraction of Nodes Deleted

Relative Size of Largest Cluster

Fraction of Nodes Deleted

of Isolated Cluster
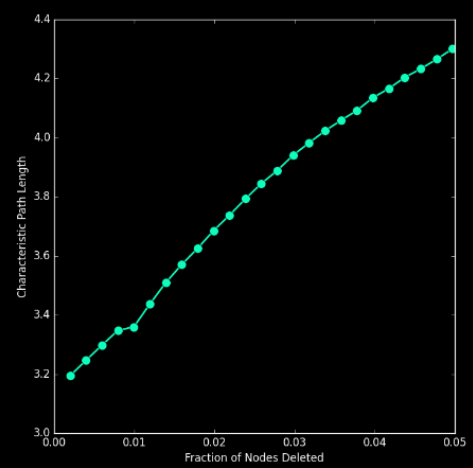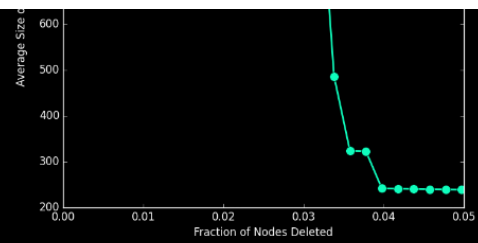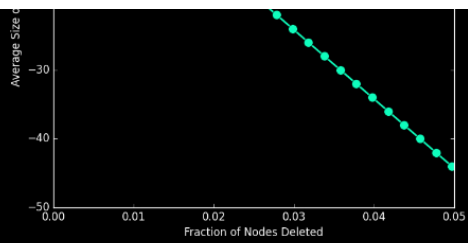
Recommended Optimized Network

We already know the crucial nodes based on their degree and Betweenness Centrality. Any damage to these nodes either by error or attack will result in damage to the whole network. To save ourselves from such situations, we can take backups of these nodes. This will increase the tolerance of the network. You can download the updated network file from below.

Download Recommended Network