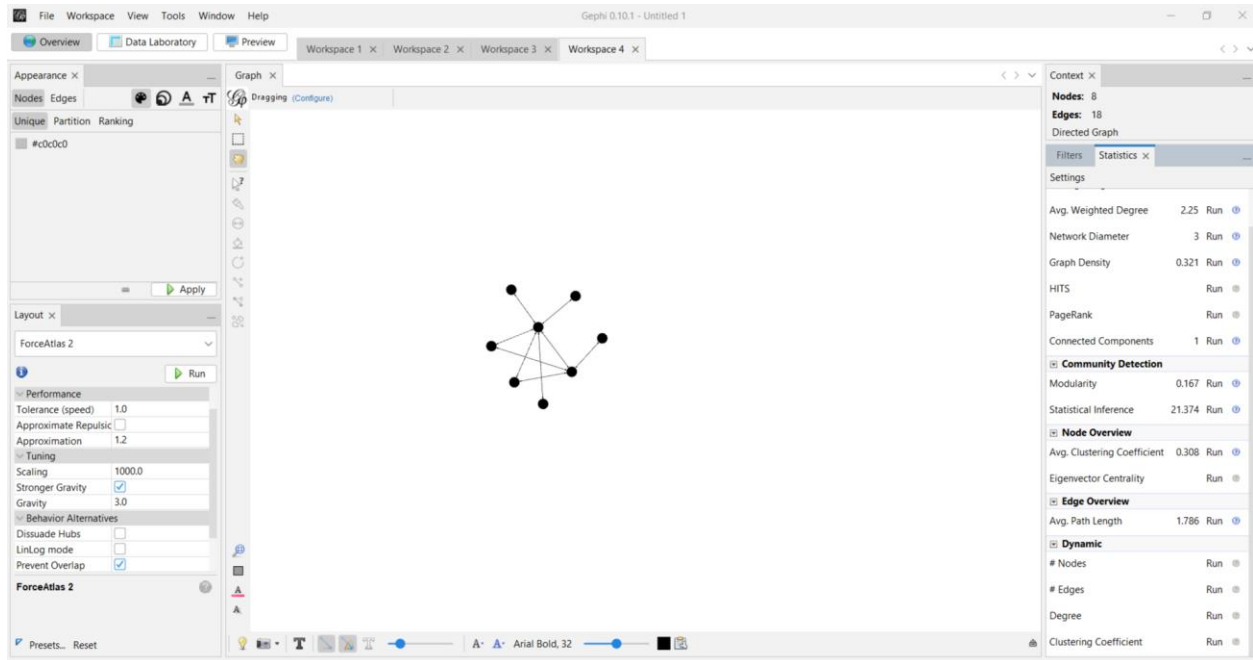# 5G Conspiracy Network

Nodes: 8

Edges: 18

Connected Components: 1
The entire network is fully connected. This means information can flow from any node to any other, which is typical of coordinated misinformation groups.

Average Degree: 2.25
Each node connects to more than two others on average. Higher degree makes message spreading faster and more efficient.

Graph Density: 0.321
 Fairly dense for such a small graph. A dense network indicates repeated interactions and possibly coordinated behavior.

HTML Report

Graph Density Report

Parameters:

Network Interpretation: directed

Results:

Density: 0.321

Average Clustering Coefficient: 0.308
 Nodes tend to form triangles and small tightly connected groups. This structure resembles "echo chambers" where misinformation is reinforced within the cluster.

HTML Report

Clustering Coefficient Metric Report
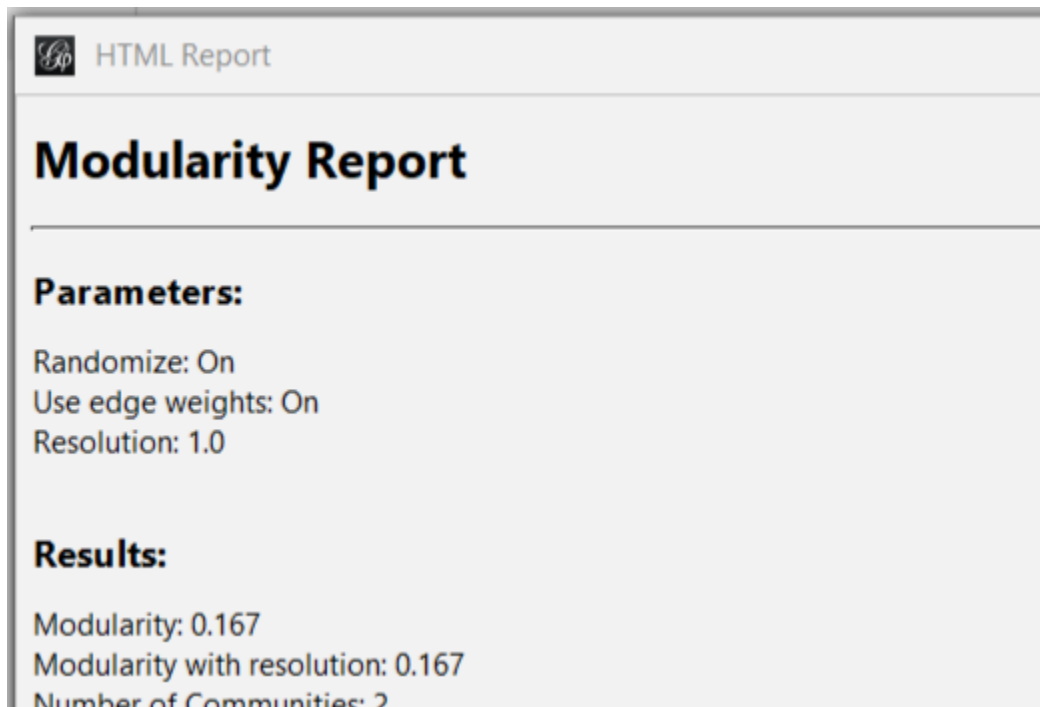
Parameters:

Network Interpretation: directed

Results:

Average Clustering Coefficient: 0.308
The Average Clustering Coefficient is the mean value of individual coefficients.
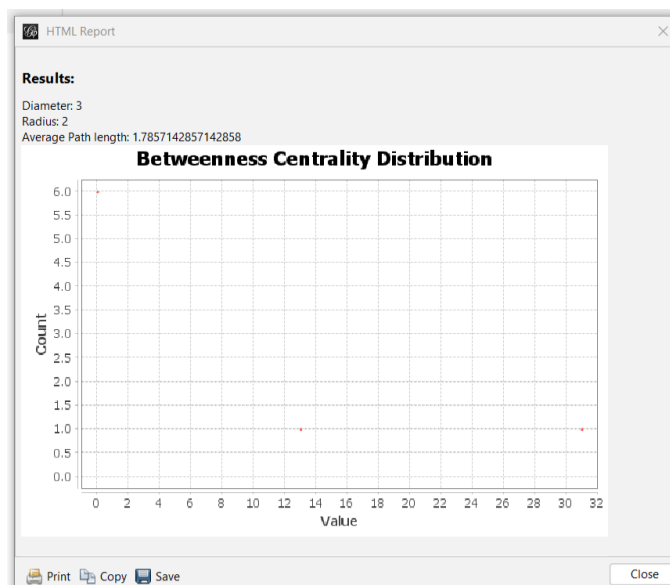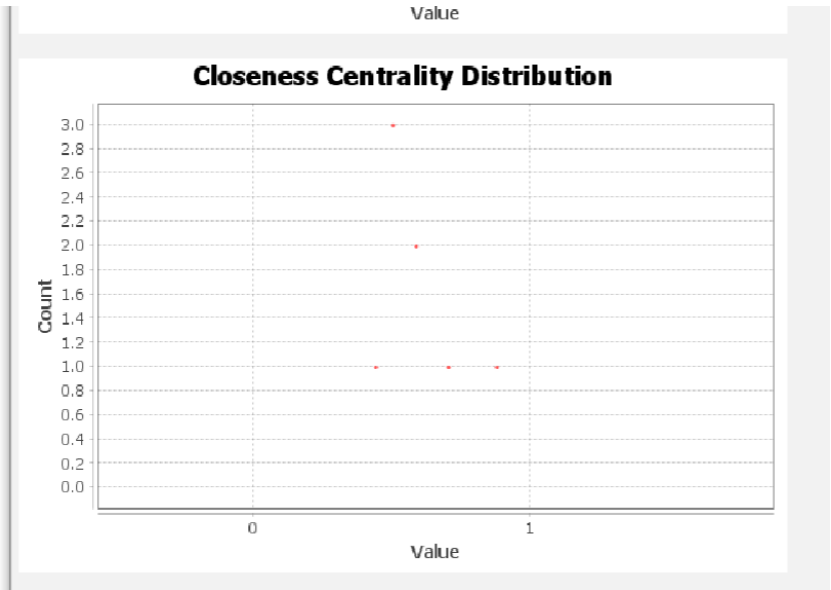
Modularity (Q): 0.167
 The network has weakly defined communities. This means the users behave more like a single group rather than split subgroups—again indicating coordinated flow.
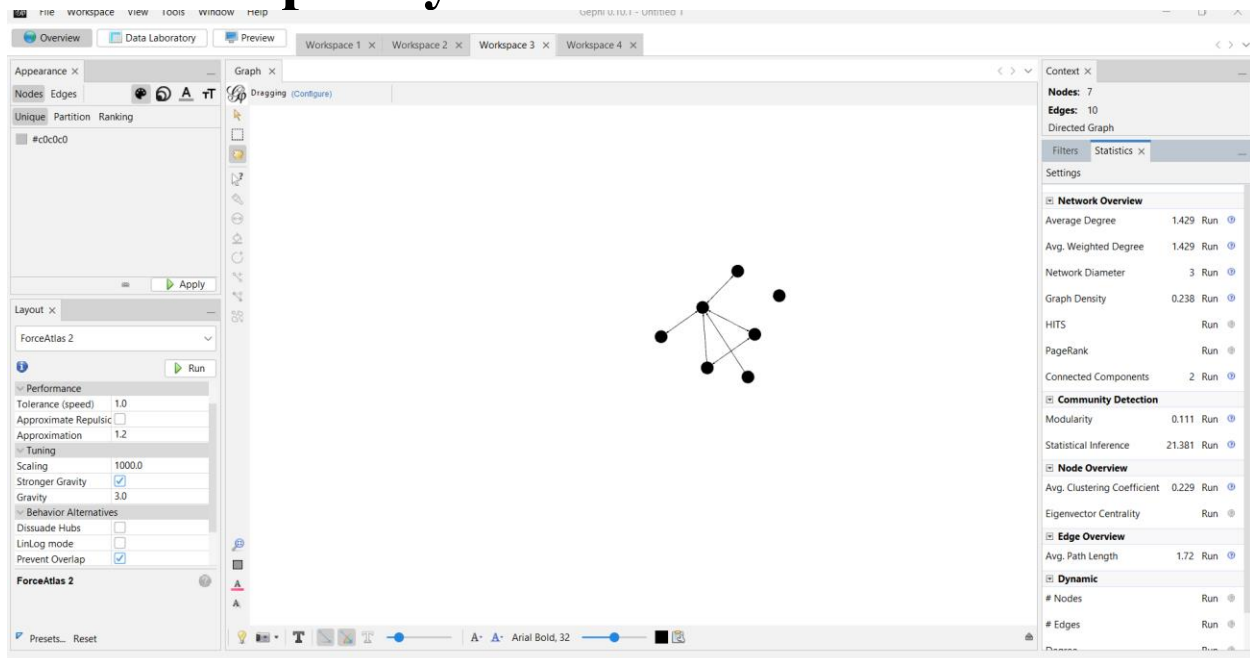
HTML Report

Modularity Report

Parameters:

Randomize: On
Use edge weights: On
Resolution: 1.0

Results:

Modularity: 0.167
Modularity with resolution: 0.167
Number of Communities: 2

Network Diameter: 3
 Any node can be reached from another within three steps. Such short paths help misinformation spread very quickly.

HTML Report ✕

Results:

Diameter: 3
Radius: 2
Average Path length: 1.7857142857142858

Betweenness Centrality Distribution

Count

6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
Value

Print Copy Save   Close

Value

Closeness Centrality Distribution
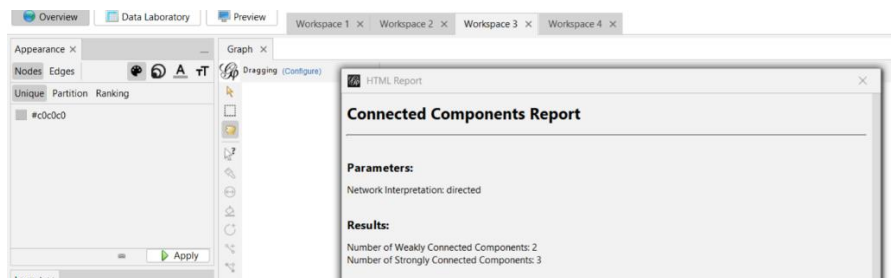
Non-Conspiracy Network

Nodes: 7

Edges: 10

Connected Components: 2

 The network is split into two separate groups. This fragmentation is common in normal social networks where not everyone interacts with everyone.

Average Degree: 1.429

 Nodes connect to fewer users on average. This lowers message flow and indicates organic, uncoordinated communication.
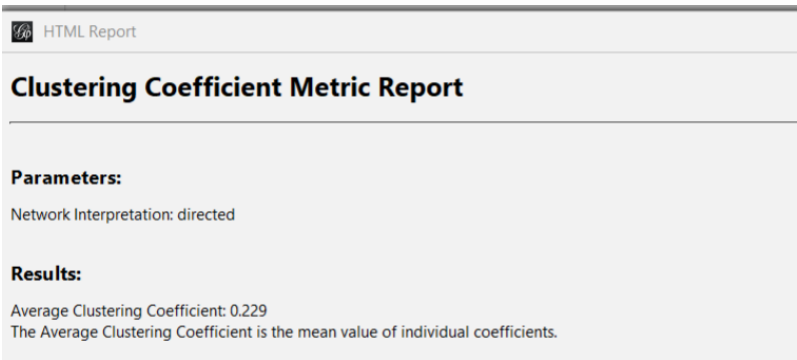
Graph Density: 0.238

 Less dense than the conspiracy network. Users interact selectively, which is expected in normal communities.
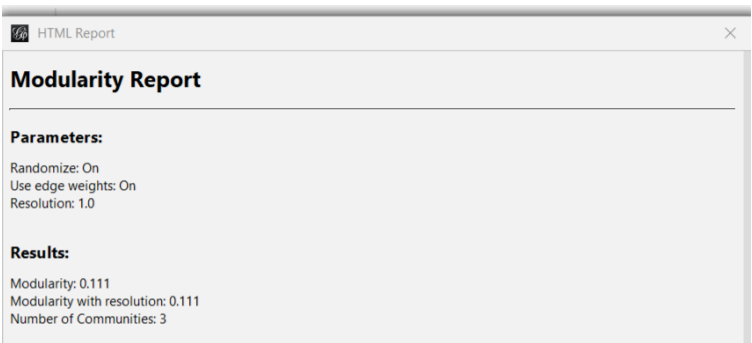
Average Clustering Coefficient: 0.229
 Some clustering exists but at a lower level. Users form small local groups, not aggressive echo-chambers.


Clustering Coefficient Metric Report

Parameters:

Network Interpretation: directed

Results:

Average Clustering Coefficient: 0.229
The Average Clustering Coefficient is the mean value of individual coefficients.

Modularity (Q): 0.111
Very weak community structure. This is normal in benign groups where interactions are loose and not coordinated.

Modularity Report

Parameters:

Randomize: On
Use edge weights: On
Resolution: 1.0

Results:

Modularity: 0.111
Modularity with resolution: 0.111
Number of Communities: 3

Network Diameter: 3
 Same numerical value as the conspiracy graph, but because this network is smaller and less dense, the similar diameter reflects less coordinated structure.
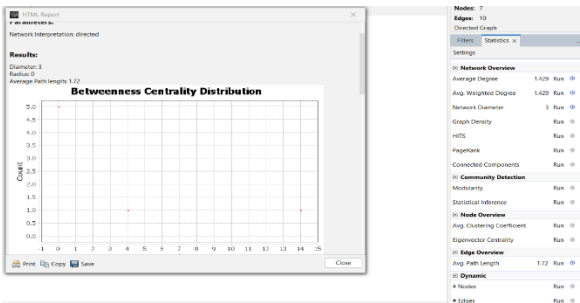
Comparative Analysis

Structure & Connectivity

The conspiracy network is **tightly connected** (1 component).

The benign network is **fragmented** (2 components).
  → Normal users don't all interact with each other; misinformation clusters tend to behave as one   unified community.

(2) Density & Degree

5G Graph: Higher degree and density

Non-conspiracy Graph: Lower interaction levels
→ Misinformation spreads more efficiently due to more connections per user.

(3) Clustering

Higher clustering in 5G network → echo chamber behavior.
→ Users in the misinformation cluster reinforce each other's content.

(4) Community Structure

> Both have low modularity, but the 5G graph has a bit more structure.
> → Suggests subtle subgroups but still strongly interconnected.

Security Perspective

Coordinated Behavior Indicators

The 5G graph shows structural patterns of **coordinated, possibly automated activity**:

One fully connected component

High density

Higher clustering
→ These are common markers used in cybersecurity for detecting disinformation operations.

Reduced Diversity

A single connected component with dense edges suggests a lack of diverse sources—typical of propaganda or bot-driven clusters.

Suspicious High-Centrality Nodes

Although the screenshots do not include centrality measures, the graph's shape strongly suggests **key hub accounts** that may be bots or orchestrators.

Spread Efficiency

Short diameter + higher average degree → rapid dissemination of misinformation compared to natural conversation patterns.

Final compare

Feature	5G Conspiracy Network	Normal Network
Connectivity	Very high	Fragmented
Density	Higher	Lower
Clustering	Higher (echo chamber)	Lower, natural
Coordination	Strong	Weak/organic
Security Risk	**High – potential coordinated misinformation**	Low