

Social Network Analysis Report

Comparison Between 5G Conspiracy Network and Non-Conspiracy Network

1. Introduction

In this report, I analyze two Twitter sub-graphs from the WICO dataset. The first graph represents a 5G conspiracy community, and the second represents a normal (non-conspiracy) community. Both graphs were analyzed using Gephi, and basic network statistics were compared.

2. Number of Nodes and Edges

The 5G conspiracy graph has more interactions and more nodes with higher degree values. The non-conspiracy graph has fewer active nodes and smaller degrees. Conspiracy networks usually have more activity because misinformation spreads quickly.

3. Average Degree

5G Conspiracy: Many nodes have degree values between 5–30.

Non-Conspiracy: Most nodes have degree values between 1–8.

This shows that conspiracy users are more connected and interact more frequently.

4. Clustering Coefficient

5G Conspiracy: Many nodes have clustering values around 0.1–0.3.

Non-Conspiracy: Higher clustering values around 0.3–0.7.

Non-conspiracy networks are more organized into tight groups, while conspiracy networks are more spread out.

5. Modularity (Communities)

5G Conspiracy: More communities but weak separation.

Non-Conspiracy: Fewer communities but better structure.

This indicates that conspiracy networks mix more between groups.

6. Betweenness Centrality

5G Conspiracy: Some nodes have very high betweenness, meaning a few accounts act as central spreaders.

Non-Conspiracy: Betweenness values are lower.

Conspiracy networks rely on key influencer accounts.

7. Connected Components

The conspiracy graph has more active components, showing higher spread.

8. Summary & Conclusion

The 5G conspiracy network shows higher activity, more connections, more influential nodes, and faster spreading behavior. The normal network shows more organized groups, lower degrees, less centrality, and slower spread. Overall, conspiracy networks are more chaotic, which is typical for misinformation communities.