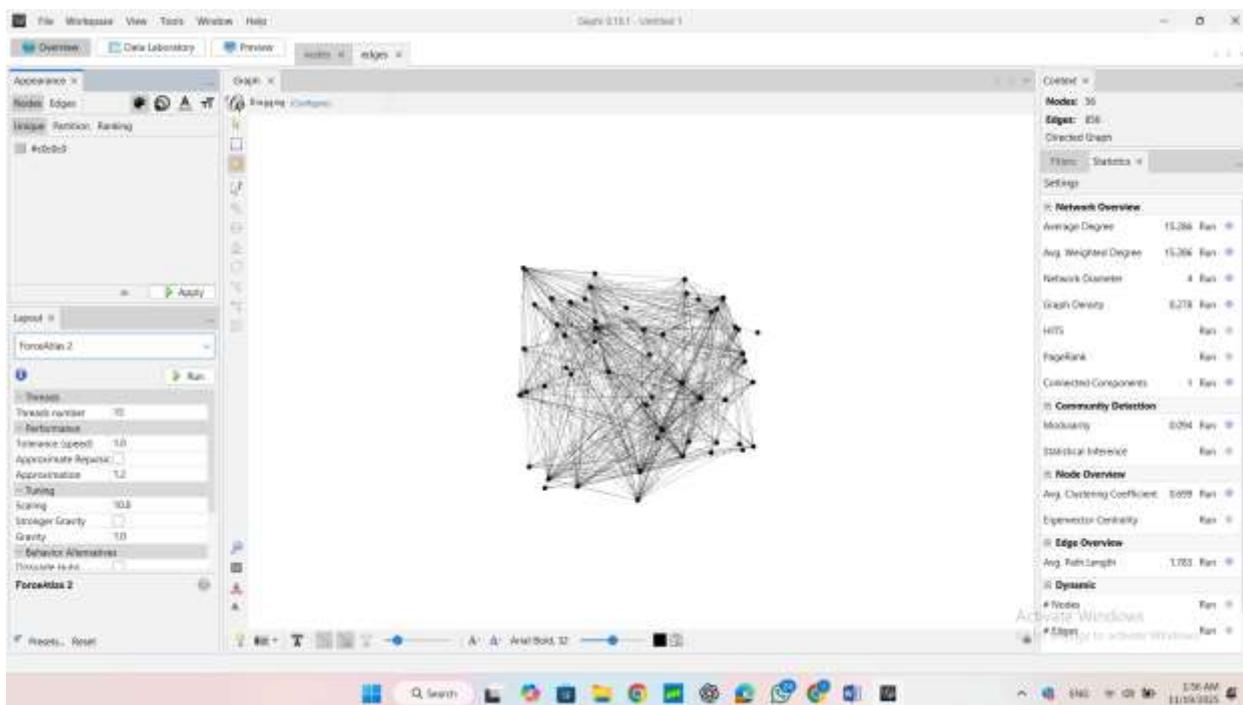


**Name:**Farah Mahmoud Elhenawy

**ID:**2205199

## Conspiracy Graph



Metric	Value
Nodes	56
Edges	856
Average Degree	15.286
Graph Density	0.278
Clustering Coefficient	0.699
Modularity Q	0.094
Connected Components	1
Network Diameter	4
Average Path Length	1.783

- **Large interaction cluster:** 56 nodes with 856 edges
- **Very high connectivity:** average degree 15.28
- **Highly clustered:** coefficient 0.699 → echo-chamber behavior
- **Low modularity:**  $Q = 0.094$  → network acts like one big group
- **Fast information spread:** path length 1.7
- **Single connected component:** no isolated subgroups

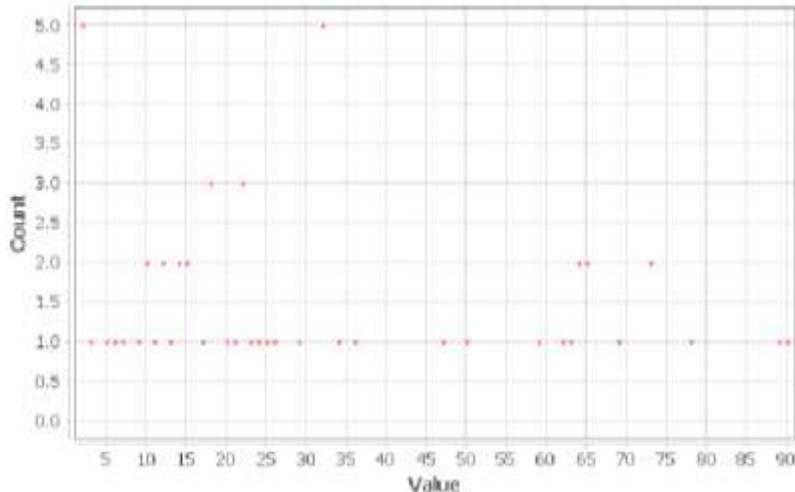
### Conclusion:

This graph behaves like a **tight misinformation bubble**, where users heavily reinforce each other and share content rapidly.

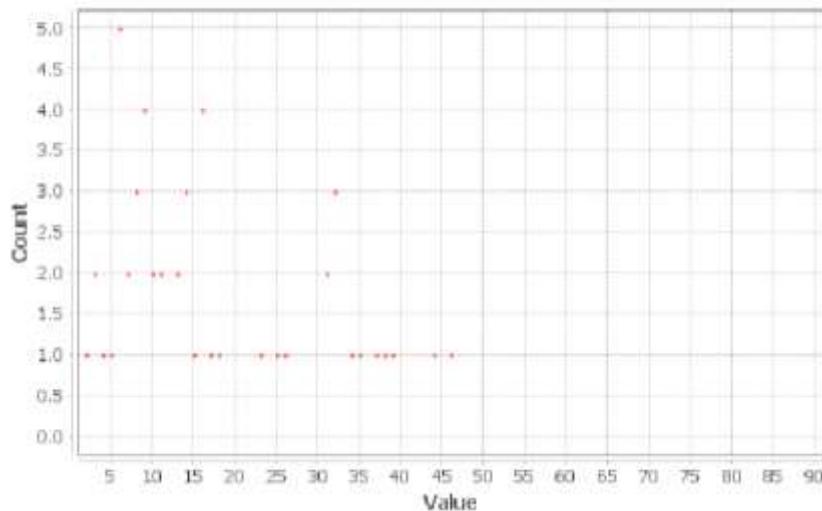
#### Results:

Average Degree: 15.286

**Degree Distribution**



**Out-Degree Distribution**



**Parameters:**

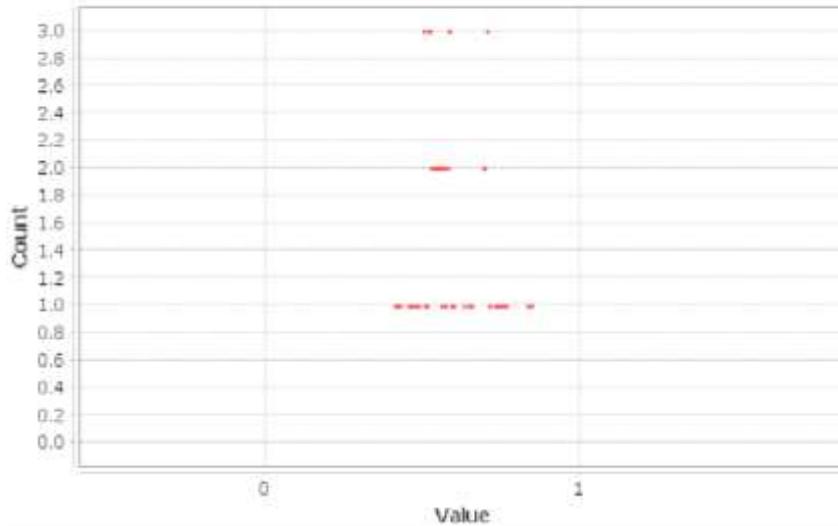
Network Interpretation: directed

**Results:**

Diameter: 4

Radius: 2

Average Path length: 1.7827922077922078

**Betweenness Centrality Distribution****Closeness Centrality Distribution**

Graph 0.0.1 - Network 1

File Worksheet View Tools Window Help

Overview Data Laboratory Preview nodes edges 0 nodes x 0 edges x

Data Table: n

Nodes Edges Configuration Add node Add edge Search Replace Import Spreadsheets Export Table More actions Filter

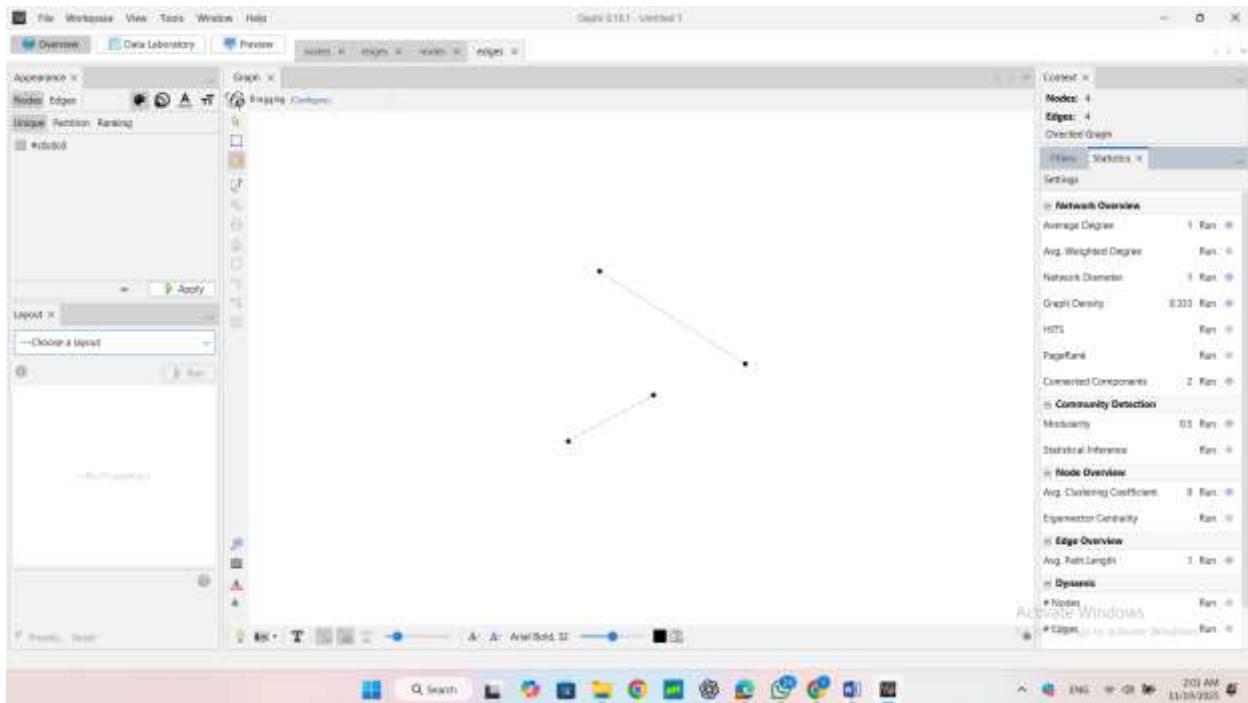
#	Label	Interval	Eccentricity	Closeness Centrality	Harmonic Closeness Centrality	Betweenness Centrality	Weighted In-Degree	Weighted Out-Degree	Weighted Degree	In-Degree	Out-Degree	Degree	Component	Strongly Connected	Modularity Clustering Coefficient
176169208	170181978	30	0.518866	0.549495	0.114286	58	6.0	9.0	3	6	9	8	0	0	0.453353
3755306	9353306	20	0.753475	0.693354	131.98738	58.0	37.0	73.0	38	37	73	8	6	0	0.6448198
170116324	130703624	20	0.654762	0.703384	85.263346	31.0	26.0	50.0	31	26	50	8	0	1	0.446255
3624778	3624779	30	0.743203	0.649495	294.394244	59.0	39.0	98.0	59	39	98	8	9	0	0.315337
3744338	37443380	30	0.844754	0.973152	470.252624	44.0	46.0	93.0	44	46	98	8	9	1	0.701573
3744553	37445533	20	0.833333	9.0	350.647164	45.0	44.0	89.0	45	44	88	8	9	2	0.642895
7462738	7462739	20	0.705118	0.769809	99.041859	31.0	32.0	65.0	31	32	65	8	9	0	0.479501
15292831	132631891	30	0.590487	0.527271	61.07918	8.0	4.0	13.0	8	4	12	8	9	0	0.683333
3744305	3744305	20	0.763488	0.649495	132.226227	32.0	32.0	71.0	32	32	73	8	9	0	0.646208
591006651	541096651	30	0.474861	0.49697	6.0	4.0	3.0	4.0	4	2	3	8	9	1	1.0
4141065	4141065	30	0.561204	0.621212	1.751128	13.0	14.0	29.0	15	14	29	8	9	2	0.618119
19607402	19607432	20	0.705118	0.769809	92.057464	32.0	32.0	64.0	32	32	64	8	9	2	0.62176
3744645	3744645	20	0.612164	0.799691	18.071743	24.0	22.0	47.0	24	23	47	8	9	2	0.640967
175291484	15267484	30	0.571994	0.649495	5.948645	16.0	16.0	32.0	16	16	32	8	9	2	0.684265
12306271	12306271	20	0.656203	0.781818	80.214836	21.0	21.0	82.0	21	21	82	8	9	2	0.54877
6584032	66833732	20	0.713333	0.891818	65.075396	36.0	35.0	65.0	36	35	65	8	9	0	0.503363
2673038	2673258	20	0.718181	0.781818	138.036275	32.0	31.0	63.0	32	31	63	8	9	2	0.601788
21662711	21662711	20	0.847039	0.727271	10.070338	23.0	23.0	38.0	23	23	38	8	9	2	0.701558
21662710	21662709	20	0.508229	0.542424	6.260079	6.0	6.0	12.0	6	6	12	8	9	1	0.643233
152888188	152888188	20	0.597006	0.643686	14.739846	18.0	18.0	36.0	18	18	36	8	9	1	0.549902
3748478	3748478	30	0.714706	0.690601	197.890943	35.0	34.0	89.0	35	34	89	8	9	1	0.446218
152306443	152301443	20	0.616667	0.420394	6.0	1.0	1.0	2.0	1	1	2	8	9	0	0.1
16491764	16491764	20	0.705118	0.769809	151.527867	42.0	42.0	64.0	42	42	64	8	9	2	0.51629
21244903	21244903	30	0.504567	0.593934	6.022751	8.0	8.0	14.0	8	8	14	8	9	0	0.616987
101590474	101590474	20	0.571994	0.636394	4.112981	17.0	15.0	32.0	17	15	32	8	9	2	0.619023
21623844	213223984	20	0.620201	0.610182	7.066589	13.0	13.0	28.0	13	13	28	8	9	0	0.766462
14524930	14524930	30	0.318868	0.549495	0.159989	7.0	6.0	11.0	7	6	11	8	9	1	0.652381
14473377	14473377	20	0.525588	0.613231	137.923169	16.0	16.0	33.0	16	16	33	8	9	2	0.665345
206163688	180184388	20	0.3123917	0.627271	6.643056	8.0	14.0	22.0	8	14	22	8	9	2	0.618371
4475999	44759993	20	0.959398	0.6	18.707032	11.0	11.0	22.0	11	11	22	8	9	0	0.683694

Add column Merge columns Delete column Clear column Copy data to other column Fill column with a value Duplicate column Create a boolean column from regex match Create column with list of regex matching groups

Active Selections: Current column To column To column

Q Search

## Non-Conspiracy Graph

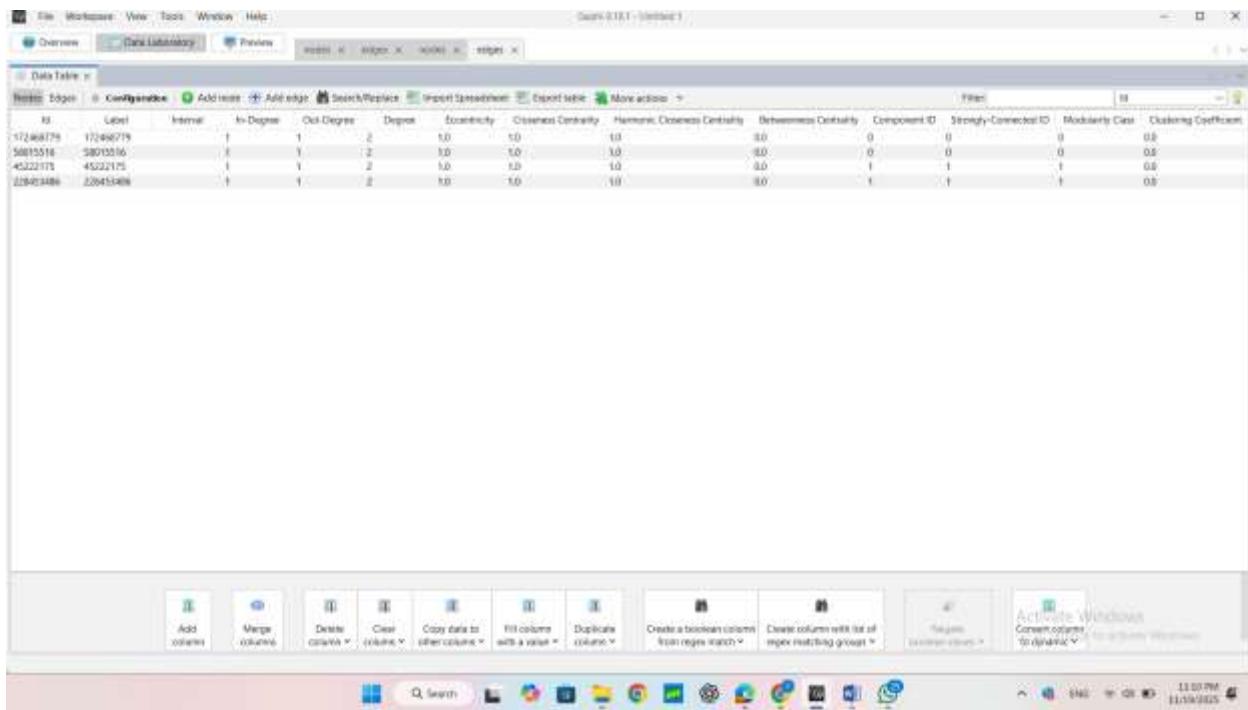


Metric	Value
Nodes	4
Edges	4
Average Degree	1
Graph Density	0.333
Clustering Coefficient	0
Modularity Q	0.5
Connected Components	2
Network Diameter	1
Average Path Length	1

- **Very small interaction set:** only 4 nodes
- **Weak connectivity:** degree = 1
- **Zero clustering:** no triangles or group interaction
- **Higher modularity:**  $Q = 0.5 \rightarrow$  graph breaks into two clear groups
- **Two connected components:** users are not all connected
- **Simple structure:** only pairs of nodes interacting

## Conclusion:

This graph represents **simple, natural, weak social interactions** with no echo chamber and no strong cohesion.



Feature	Conspiracy	Non-Conspiracy
Nodes	56	4
Edges	856	4
Density	0.278	0.333
Clustering	<b>High (0.699)</b>	<b>Zero</b>
Modularity	<b>Very low (0.094)</b>	High (0.5)
Components	1	2
Structure	One big echo chamber	Small disconnected interactions
Spread	Very fast	Minimal
Behavior	Coordinated misinformation	Normal random interactions

The two graphs show **opposite structural behaviors**:

## Conspiracy Network

- Dense
- Highly connected
- Strong clustering
- Low modularity
- One large connected component
- Very fast information flow

This means users form a **tight echo chamber**, allowing misinformation to spread quickly and repeatedly within the same group.

## Non-Conspiracy Network

- Very small
- Weakly connected
- No clustering
- High modularity → more separation
- Multiple components

This shows **natural, weak, non-coordinated interactions** with no echo-chamber structure.