FUNDAMENTALS OF DATABASE MANAGEMENT SYSTEM

END TERM PROJECT

TERM – III

SUBMITTED BY:

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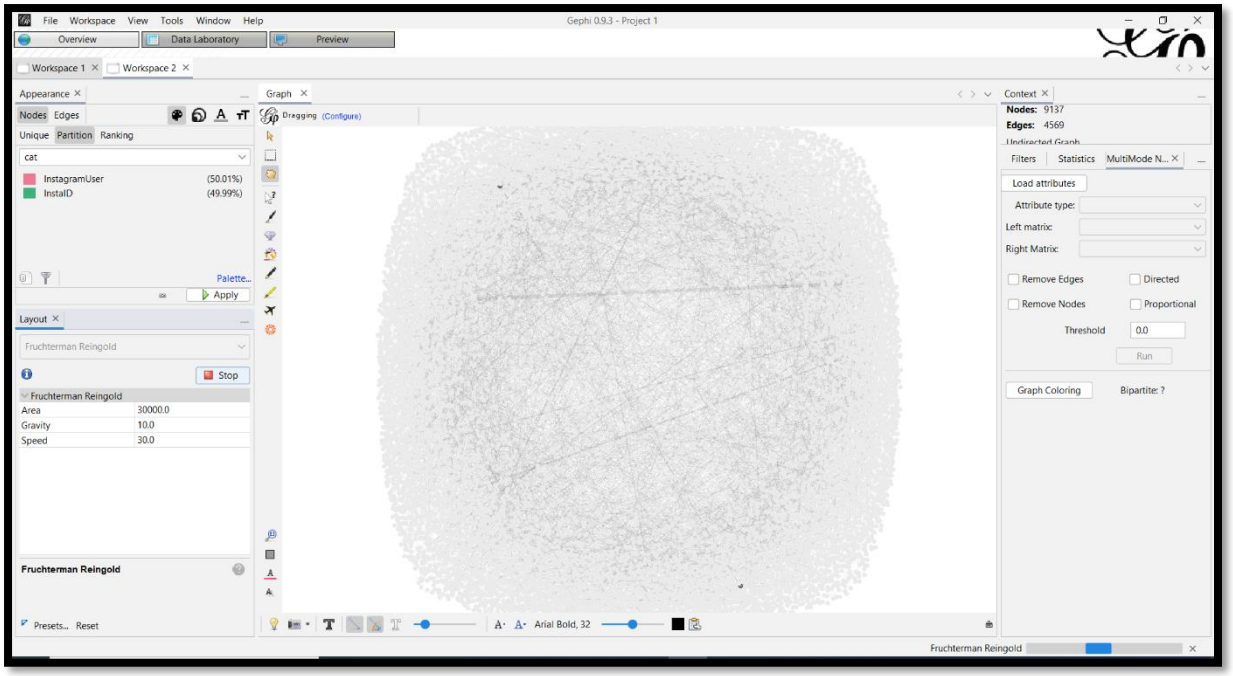
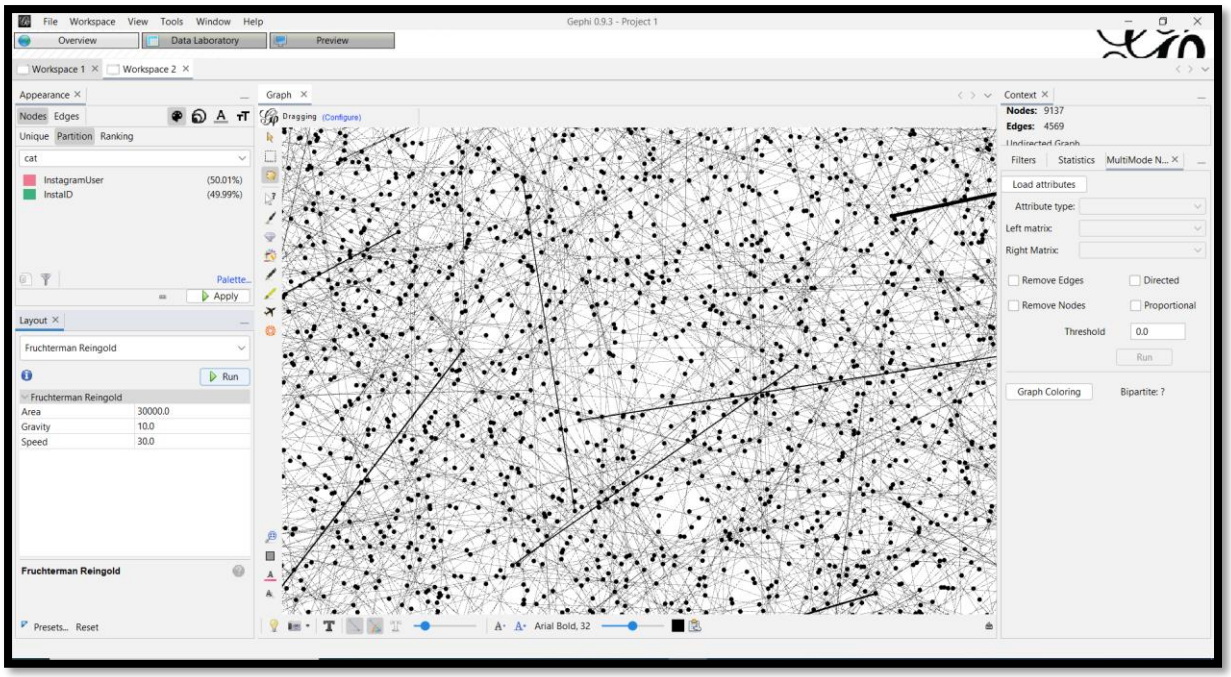
Amber Heard Instagram Comments – Network Analysis

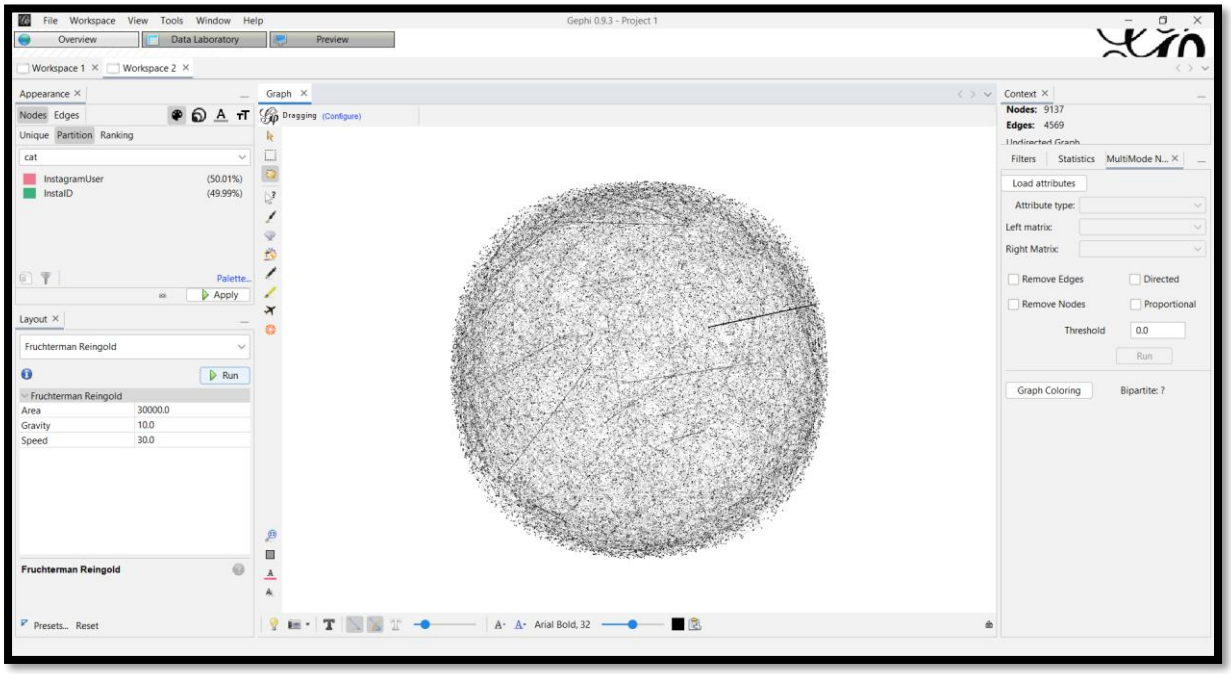
The Social Network Analysis was conducted on Amber Heard's Instagram Comments Dataset. Two different layouts were generated to analyse the dataset in detail. The same has been depicted in the figures attached.

Graph Processing

Fruchterman Reingold




File Workspace View Tools Window Help
Gephi 0.9.3 - Project 1
Overview
Data Laboratory
Preview
Workspace 1
Workspace 2
Appearance
Nodes Edges
Unique Partition Ranking
cat
InstagramUser (50.01%)
InstalD (49.99%)
Palette...
Apply
Layout
Fruchterman Reingold
Run
Fruchterman Reingold
Area 30000.0
Gravity 10.0
Speed 30.0
Fruchterman Reingold
Presets... Reset
Graph
Dragging (Configure)
Arial Bold, 32
Context
Nodes: 9137
Edges: 4569
Filters Statistics MultiMode N...
Load attributes
Attribute type:
Left matrix:
Right Matrix:
Remove Edges
Directed
Remove Nodes
Proportional
Threshold 0.0
Run
Graph Coloring
Bipartite: ?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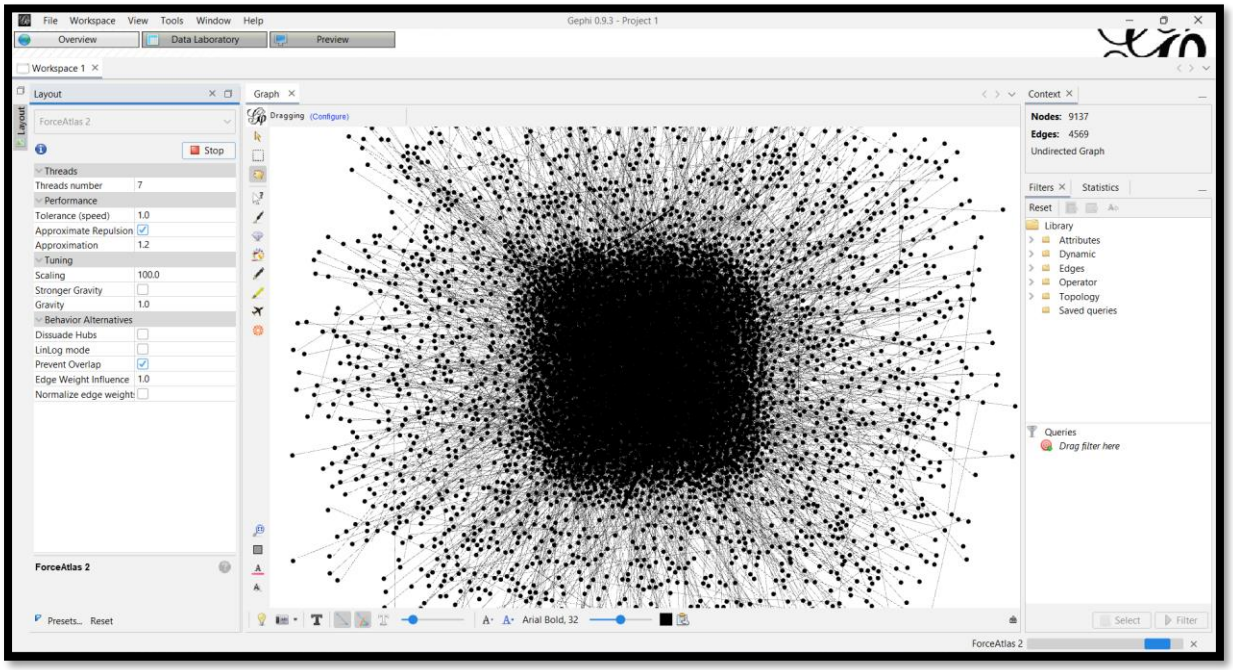
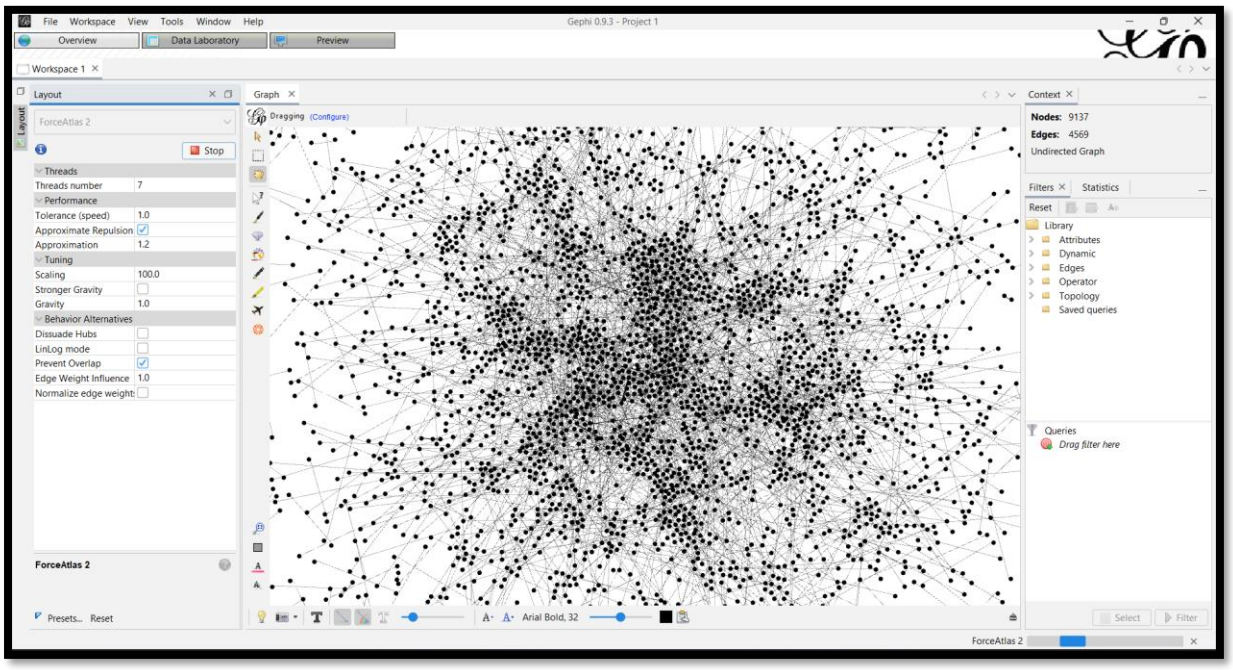
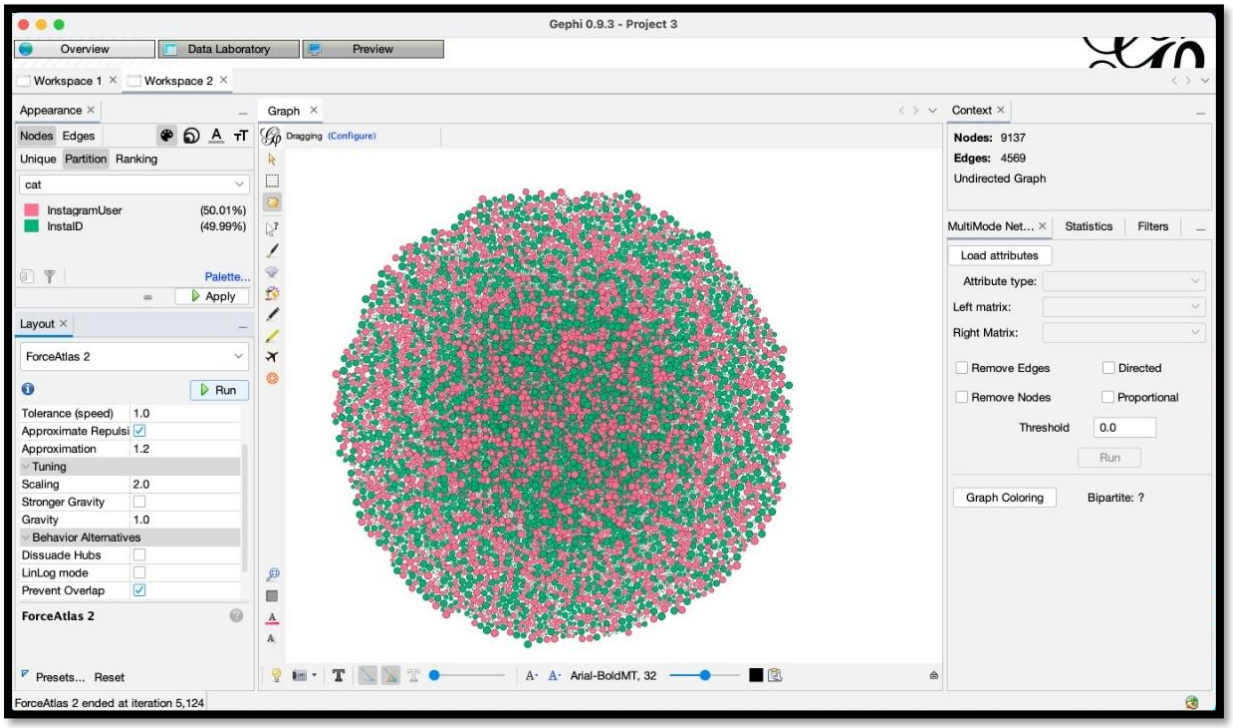
Force Atlas2



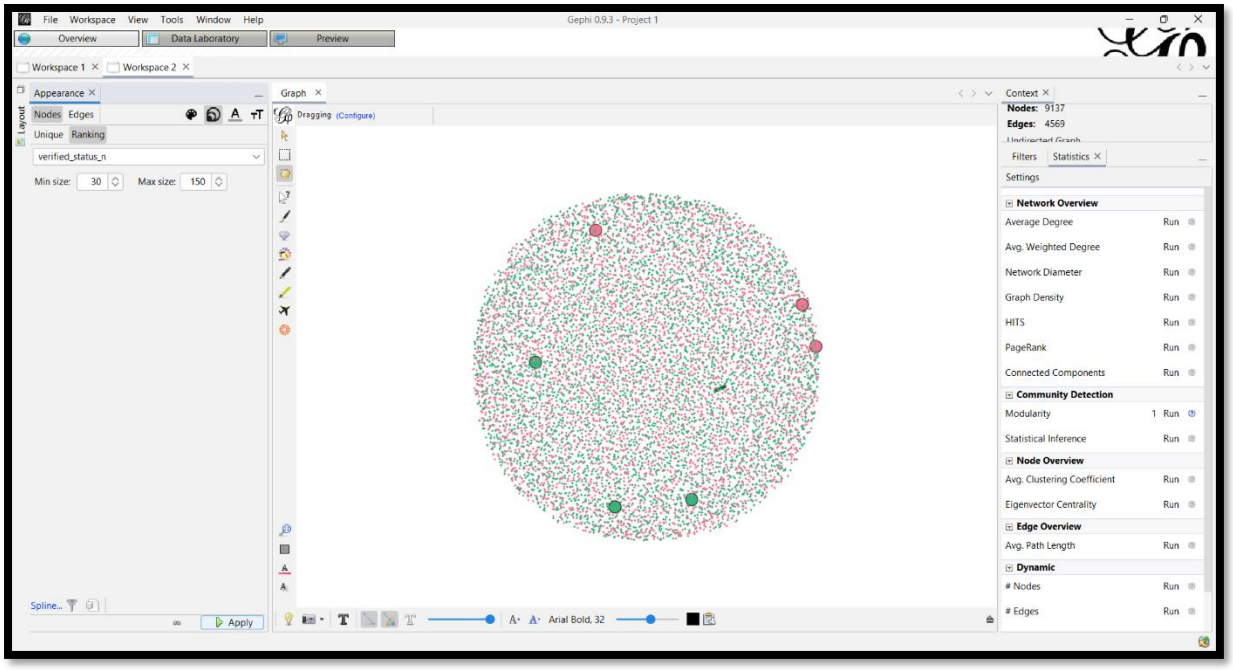


Differentiating Instagram users and INSTAID



Differentiating verified vs non-verified users

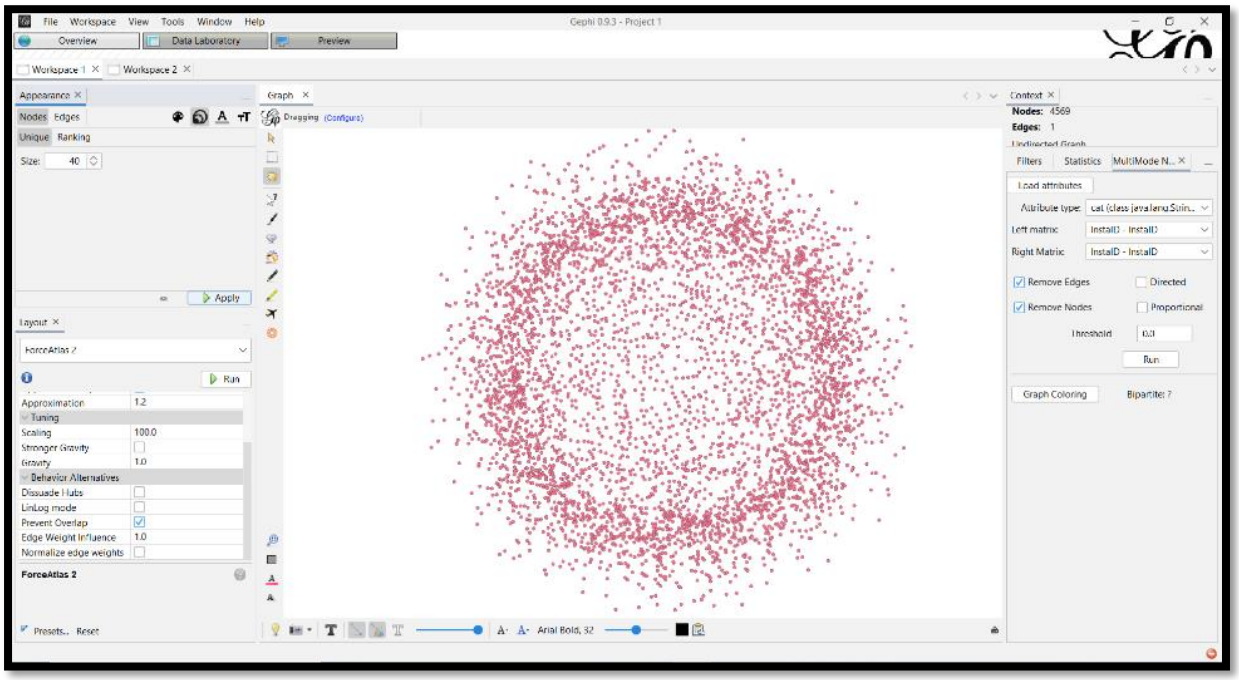
- Ranking according to the status of verification of the user



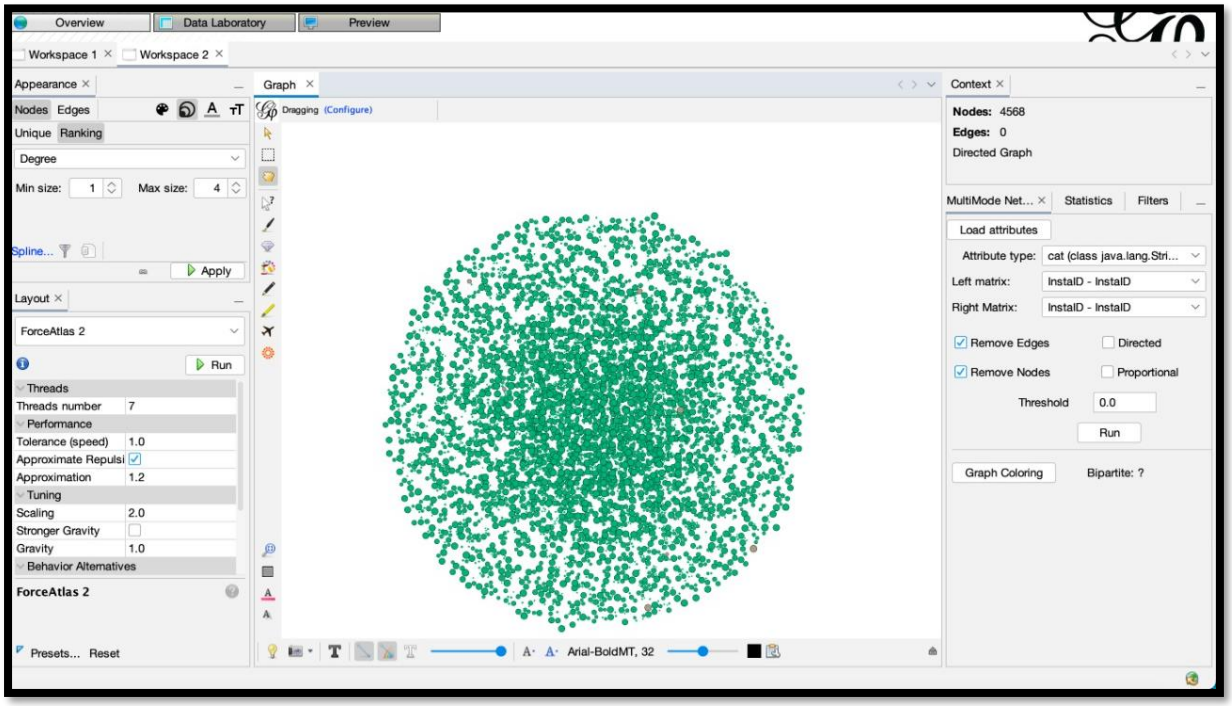
Projecting two mode graph to one mode graph

- Multi-mode Network for Projections

Left matrix has InstagramUser – InstaID and Right Matrix has InstaID - InstagramUser



Left matrix has InstaID - InstagramUser and Right Matrix has InstagramUser – InstaID



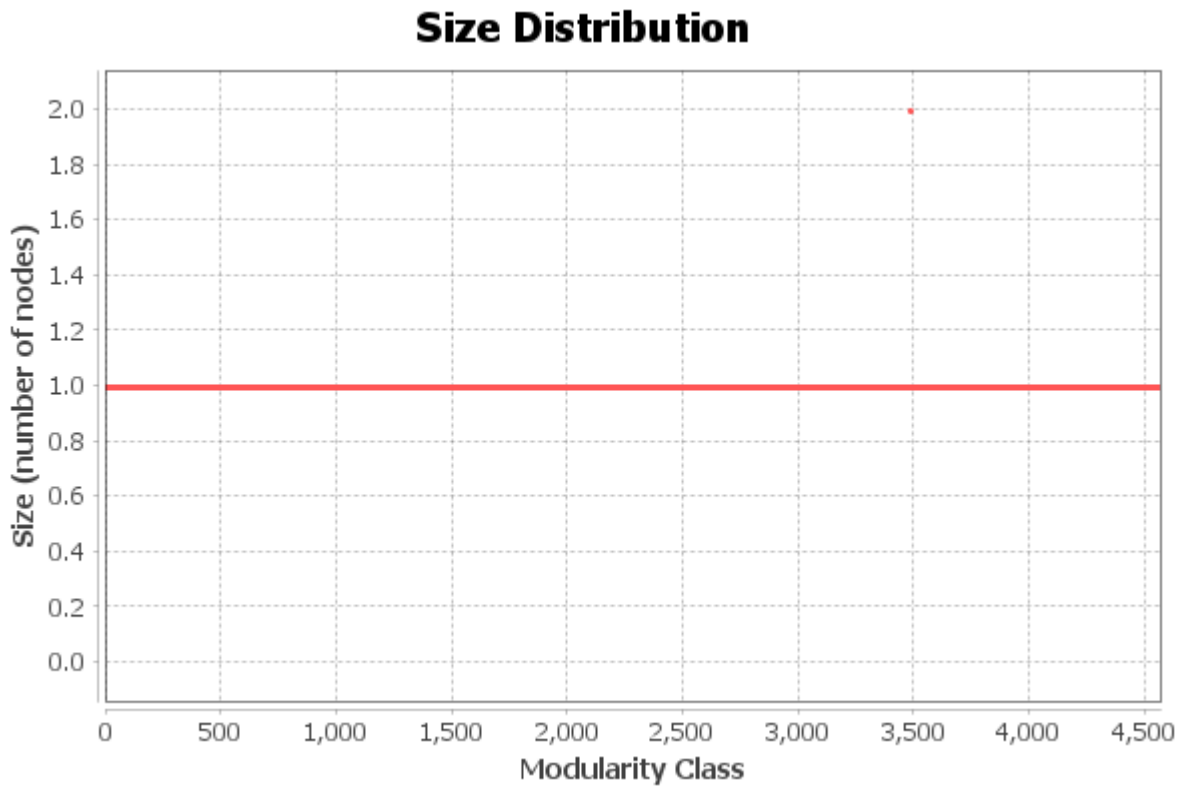
Analysing network with filters and communities

- Modularity Report

Modularity Report

Parameters:
Randomize: On
Use edge weights: On
Resolution: 1.0

Results:
Modularity: 0.000
Modularity with resolution: 0.000
Number of Communities: 4568



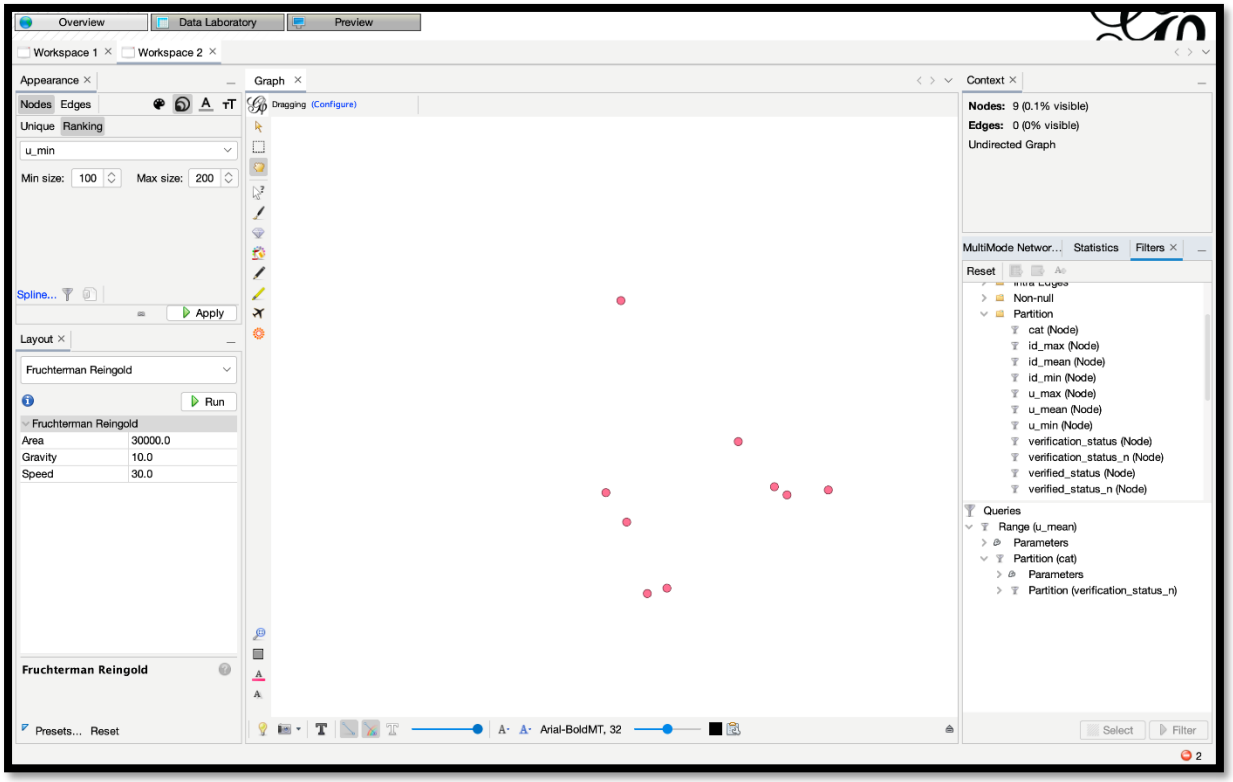
Algorithm:
Vincent D Blondel, Jean-Loup Guillaume, Renaud Lambiotte, Etienne Lefebvre, *Fast unfolding of communities in large networks*, in Journal of Statistical Mechanics: Theory and Experiment 2008 (10), P1000

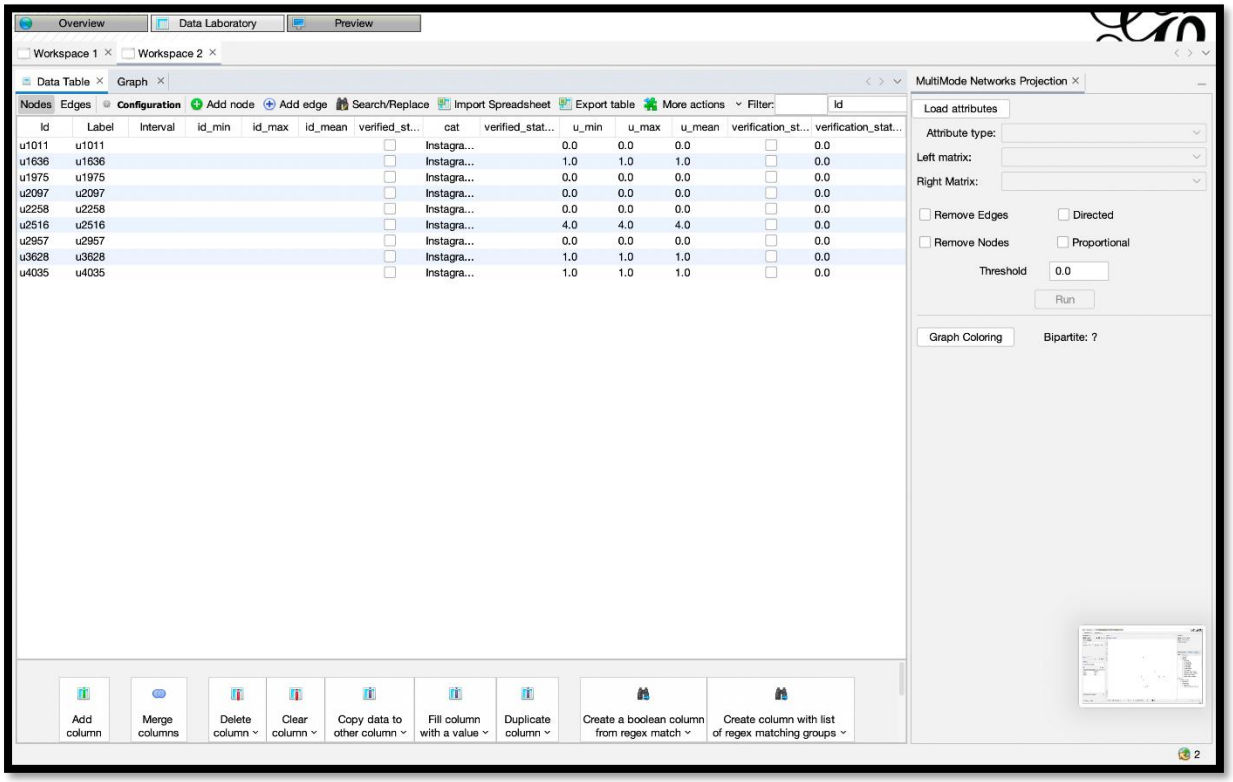
Resolution:
R. Lambiotte, J.-C. Delvenne, M. Barahona *Laplacian Dynamics and Multiscale Modular Structure in Networks 2009*

Filtration

- Creating nested filters

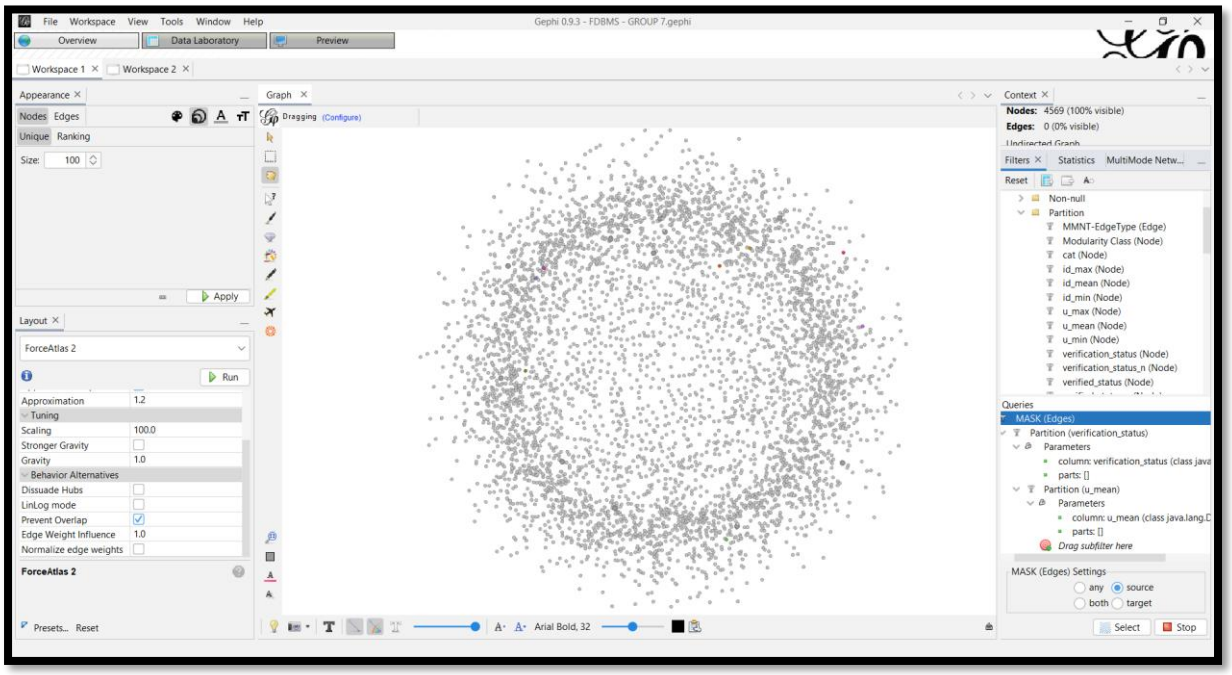
In the filter tab in Range, we selected (U._ mean). Then we added a filter which we selected from Partition i.e., cat and then we selected filtration status as false.



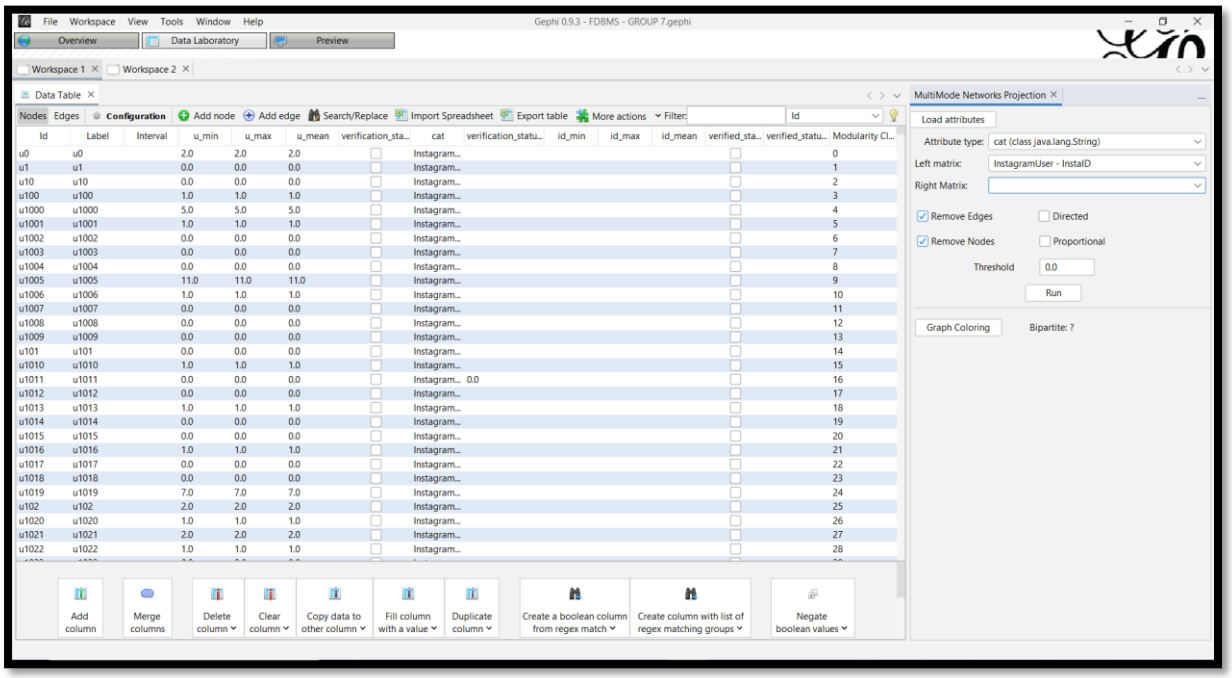


Masking Operator

- Masking the edges of relevant attributes

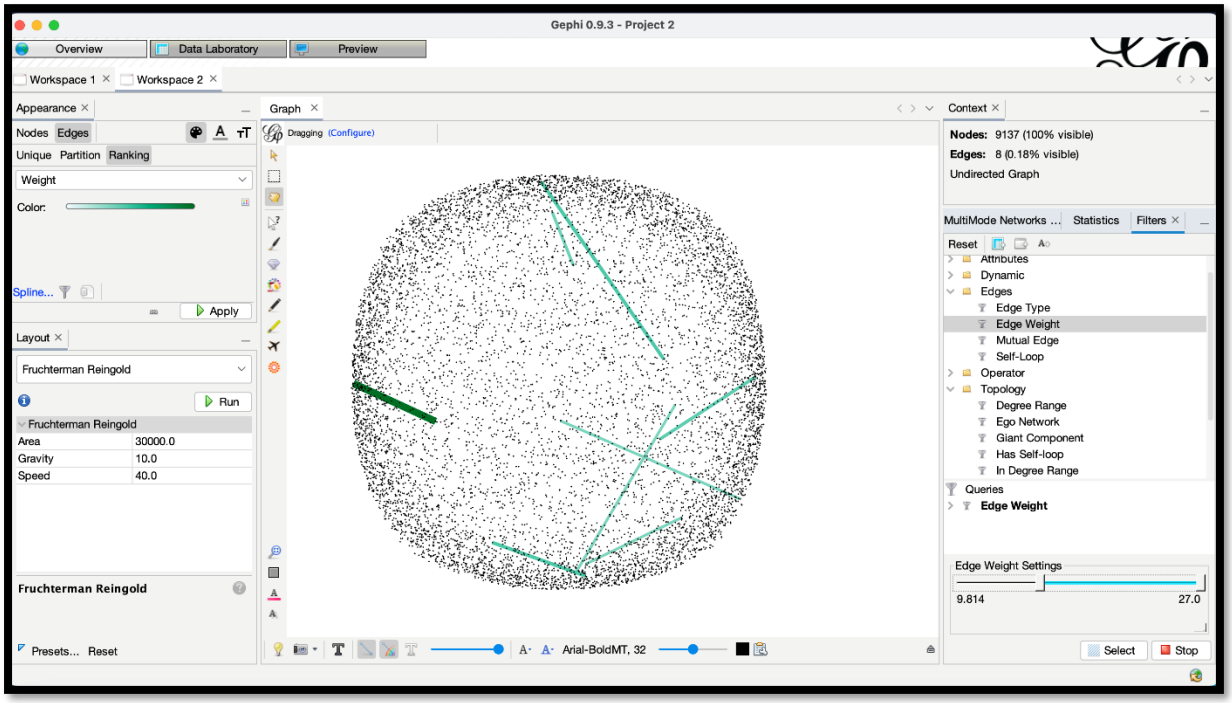


- Data Laboratory View



Edge Weight Filters

A few strong connections were found in edge weight filters



As seen, the strongest weight is of 27.0 between the source u2363 and Target i3896.