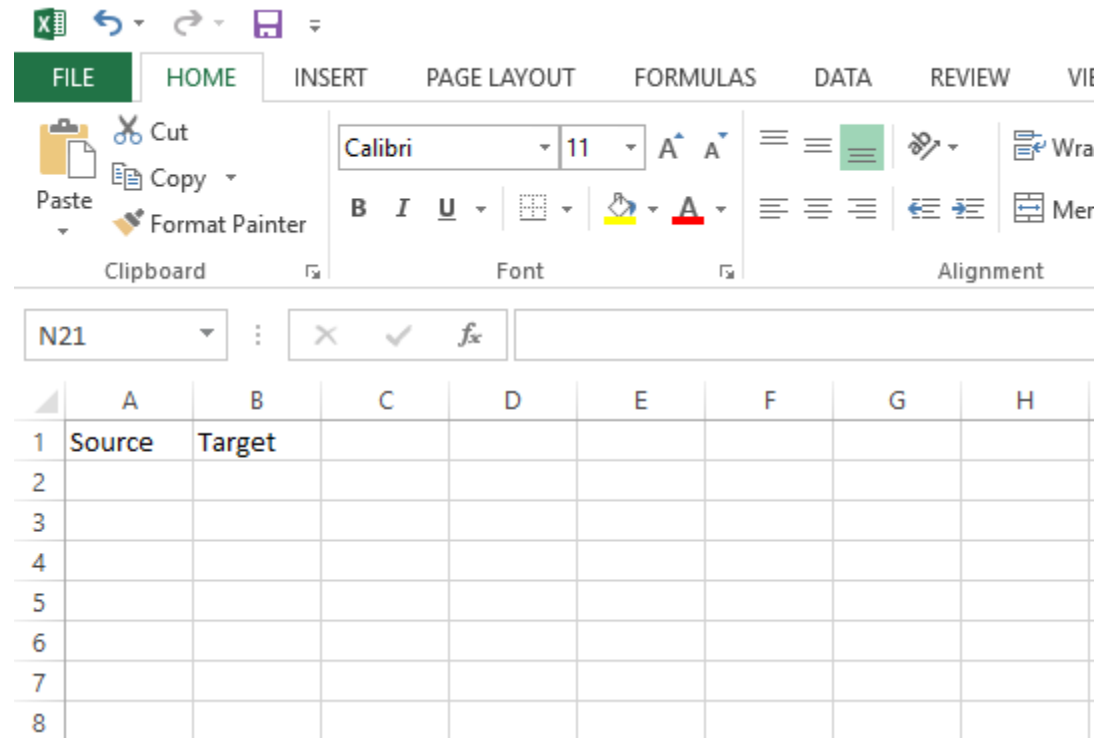


Practice Constructing Online Interaction Graph

Digital Business Ecosystem Research Center



Construct the Dataset



Construct the Dataset (2)

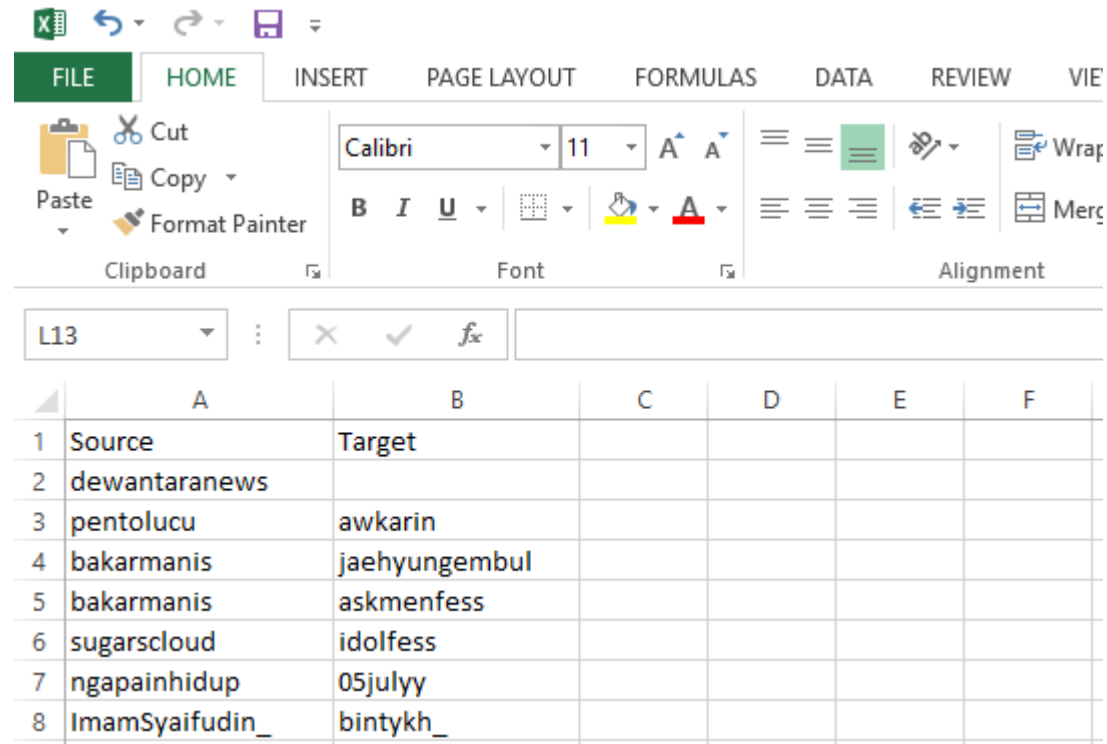
hasilcrawlingzonasi - Excel (Product Activation Failed)

	A	B	C	D	E	F	G	H	I	J	K	L
1	user_id	status_id	created_at	screen_name	text	source	display_text_wid	reply_to_status_i	reply_to_user_id	reply to screen	is_quote	is_retweet
2	x10137729489796	x11720439069236	9/12/2019 07:06	dewantaranews	Mendidik Produk	WordPress.com	46				FALSE	FALSE
3	x11496064692783	x11720334458133	9/12/2019 06:25	pentolucu	@awkarin rezeki	Twitter for Andro	16	x11720277480233	x2918748864	awkarin	FALSE	FALSE
4	x11369417477060	x11720317980390	9/12/2019 06:18	bakarmanis	@jaehyungembu	Twitter for Andro	107	x11720314246453	x10995262107725	jaehyungembul	FALSE	FALSE
5	x11369417477060	x11720006673066	9/12/2019 04:15	bakarmanis	@askmenfess	Twitter for Andro	280	x11716661868804	x81042382403429	askmenfess	FALSE	FALSE
6	x247652893	x11720265235801	9/12/2019 05:57	sugarscloud	@idolfess kelaku	Twitter Web App	26	x11720221407632	x10742296217747	idolfess	FALSE	FALSE
7	x1366791030	x11720148730954	9/12/2019 05:11	ngapainhidup	@05julyy Peh ner	Twitter for Andro	36	x11720009801219	x2346289764	05julyy	FALSE	FALSE
8	x1203331206	x11720138252912	9/12/2019 05:07	ImamSyiaifudin_	@bintykh_ Gante	Twitter for iPhone	41	x11717643991340	x10027450146805	bintykh_	FALSE	FALSE

Source

Target

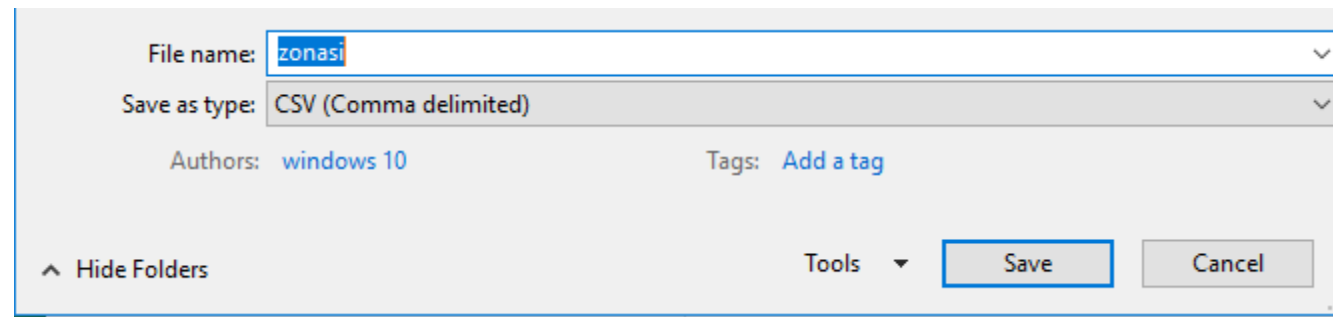
Construct the Dataset (3)



The screenshot shows the Microsoft Excel interface with the 'HOME' tab selected. The ribbon includes sections for Clipboard, Font, and Alignment. The font is set to Calibri, size 11. The Alignment section shows text alignment options. Below the ribbon, the formula bar shows 'L13'. The main area displays a table with 8 rows and 6 columns (A-F).

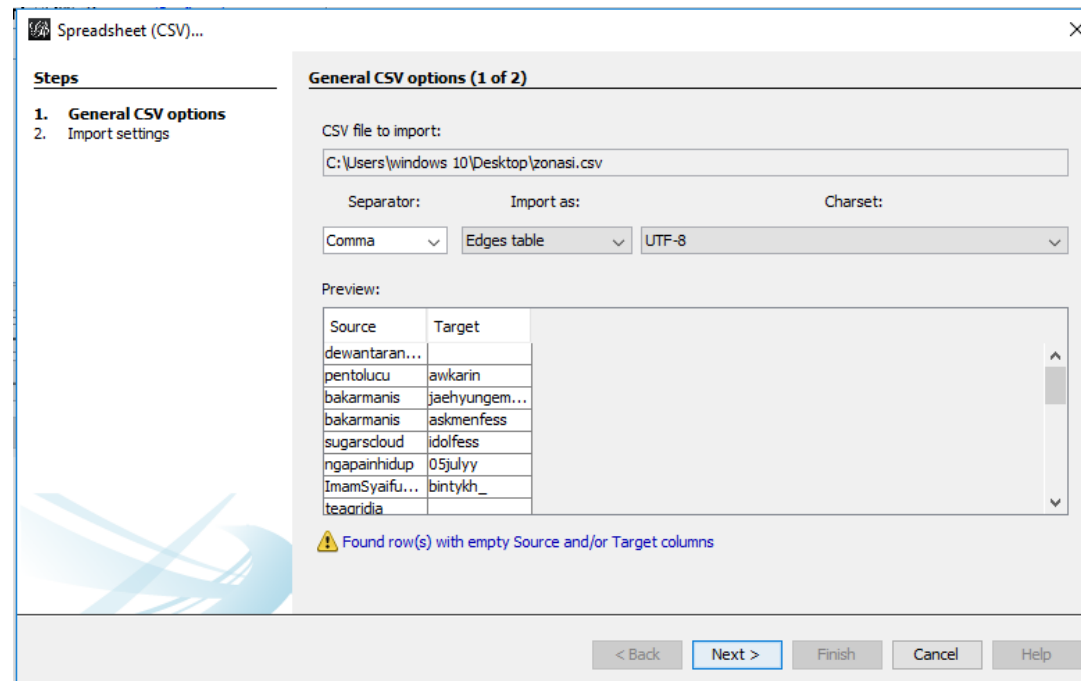
	A	B	C	D	E	F
1	Source	Target				
2	dewantaranews					
3	pentolucu	awkarin				
4	bakarmanis	jaehyungembul				
5	bakarmanis	askmenfess				
6	sugarscloud	idolfess				
7	ngapainhidup	05julyy				
8	ImamSyiaifudin_	bintykh_				

Construct the Dataset (4)



Save file as CSV

Import Dataset to Gephi



File > Import Spreadsheet > Choose the Dataset File

Data Information

- Graph type can be undirected, directed, mixed
- The workplace can be new or append to the existing one

Import report

Source: Stream ImporterSpreadsheetCSV

Issues Report

Nodes	Issues
Parallel edges detected, remember to choose a merge strategy	INFO
[Record #1] Ignoring edge due to empty source and/or target node ids	SEVERE
[Record #8] Ignoring edge due to empty source and/or target node ids	SEVERE
[Record #11] Ignoring edge due to empty source and/or target node ids	SEVERE
[Record #12] Ignoring edge due to empty source and/or target node ids	SEVERE

Graph Type: Directed

Auto-scale ☒ Create missing nodes ☐ Self-loops ☐

Edges merge strategy: Sum

of Nodes: 1087
of Edges: 818
Dynamic Graph: no
Dynamic Attributes: no
Multi Graph: no

☒ New workspace
☐ Append to existing workspace

OK Cancel

Data Information

- Graph type can be undirected, directed, mixed
- The workplace can be new or append to the existing one

Import report

Source: Stream ImporterSpreadsheetCSV

Issues Report

Nodes	Issues
Parallel edges detected, remember to choose a merge strategy	INFO
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[Record #12] Ignoring edge due to empty source and/or target node ids	SEVERE

Graph Type: Directed

Auto-scale ☒ Create missing nodes ☐ Self-loops ☐

Edges merge strategy: Sum

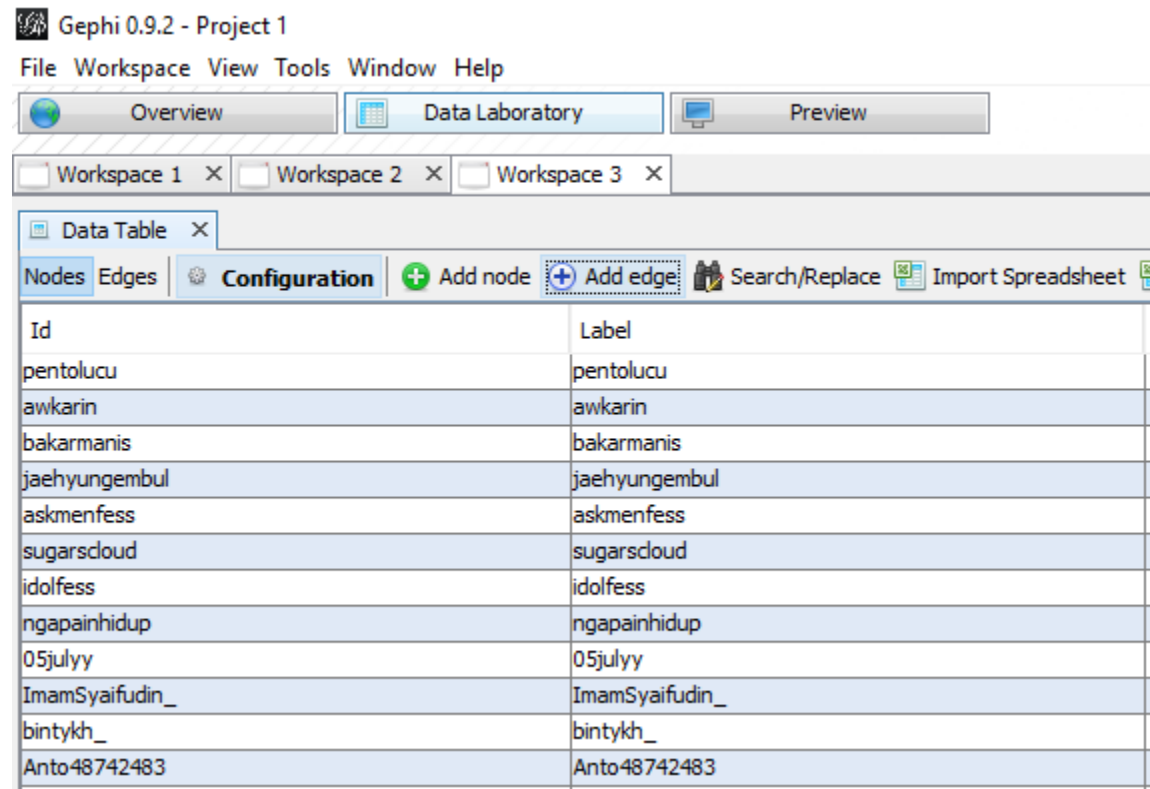
of Nodes: 1087
of Edges: 818
Dynamic Graph: no
Dynamic Attributes: no
Multi Graph: no

☒ New workspace
☐ Append to existing workspace

OK Cancel

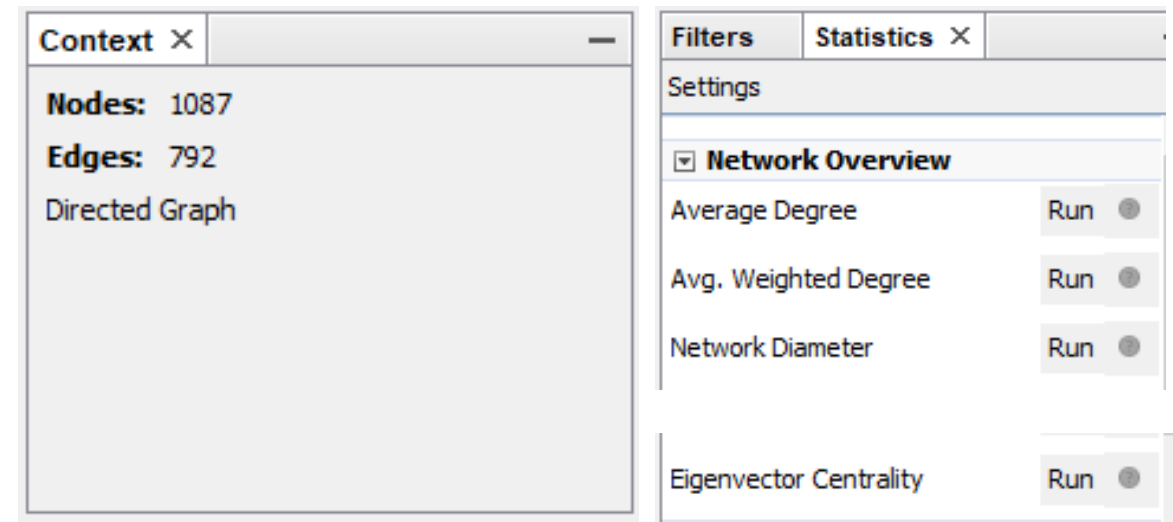
Define the Node Label

- Click Data Laboratory
- Choose Nodes
- Click Copy Data to Other Column
- Choose Id
- Choose Label



Run the Centrality Metric

- Average Degree to measure Degree Centrality
- Average Weighted Degree to measure Average Weighted Degree Centrality
- Network Diameter to measure Betweenness Centrality and Degree Centrality
- Eigenvector Centrality to measure Eigenvector Centrality



Centrality Metric Measurement Result

Data Table						
Nodes Edges Configuration + Add node + Add edge Search/Replace Import Spreadsheet Export table More act						
Id	Label	Degree	Weighted Degree	Betweenness Cent...	Closeness Centrality	Eigenvector Centr...
pentolucu	pentolucu	1	1.0	0.0	1.0	0.0
awkarin	awkarin	2	2.0	0.0	0.0	0.014358
bakarmanis	bakarmanis	2	2.0	0.0	1.0	0.0
jaehyungembul	jaehyungembul	1	1.0	0.0	0.0	0.007179
askmenfess	askmenfess	30	30.0	0.0	0.0	0.215375
sugarscloud	sugarscloud	1	1.0	0.0	1.0	0.0
idolfess	idolfess	42	42.0	0.0	0.0	0.313744
ngapainhidup	ngapainhidup	1	1.0	0.0	1.0	0.0
05julyy	05julyy	1	1.0	0.0	0.0	0.007179
ImamSyaifudin_	ImamSyaifudin_	1	1.0	0.0	1.0	0.0
bintykh_	bintykh_	1	1.0	0.0	0.0	0.007179
Anto48742483	Anto48742483	1	1.0	0.0	1.0	0.0
mas_hbsan	mas_hbsan	1	1.0	0.0	0.0	0.007179
sifahri_	sifahri_	1	1.0	0.0	1.0	0.0
faizalkauri	faizalkauri	1	1.0	0.0	1.0	0.0
kartikagstn18	kartikagstn18	1	1.0	0.0	0.0	0.007179
anjumatszxx	anjumatszxx	1	1.0	0.0	1.0	0.0
edcfess	edcfess	25	25.0	0.0	0.0	0.223259

Run the Network Structure Metric

- Graph Density to measure Network Density
- Modularity to measure Community Detection
- Connected components to measure Connected Components
- Avg. Path Length to measure Average Path Length

Graph Density	Run ?
Modularity	Run ●
Connected Components	Run ●
Edge Overview	
Avg. Path Length	Run ?

Visualizing the Network Based on Centrality

Node Color Based on Centrality

- Click Appearance > Nodes > Color > Ranking > Choose the Centrality > Apply

Node Size Based on Centrality

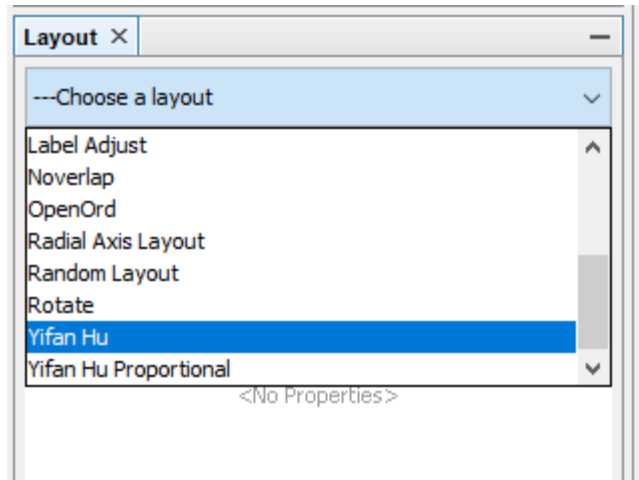
- Click Appearance > Nodes > Size > Ranking > Choose the Centrality > Define the size > Apply

Edge Color Based on Weight

- Click Appearance > Edges > Color > Ranking > Choose Weight > Apply

Network Layout

- Click Layout > Choose Layout > Apply



Visualizing the Network Based on Community

Node Color Based on Community

- Click Appearance > Nodes > Color > Partition > Choose the Modularity Class > Apply



THANK YOU