

RA MODEL VISUALIZATION

WITH GEPHI

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IMPORTING EDGE AND NODE FILES TO GEPHI

Open Gephi and select New Project. Click on the Data Laboratory Tab as shown below.

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In the Data Laboratory Tab, we will import both the Edges file and the Nodes file.

- 1. If the Data Table does not appear, click on Window and then Data Table.
- 2. Click on the Import Spreadsheet button

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- 3. With Nodes Table selected, use the _____ browse for the node file and click Next
- 4. The next window will show a list of Import settings
 - a. The Type variable should be defined as a String variable already
 - b. The Size variable should be changed to a Float variable
 - c. Check the box at the bottom to "Force nodes to be created as new ones" and click Finish

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5. Click the Import Spreadsheet button again

- 6. With Edges Table selected, browse for the node file and click Next
 - a. If you have labels and weights, they should be String and Float variables, respectively.
 - b. It doesn't matter whether the box is checked for "Create missing nodes." Click Finish

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Now we can generate an initial network visualization from Gephi's Overview Tab

Overview	Data Laboratory	Preview	N	XX
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Choose a rank parameter	• • • • • • • • • • • • • • • • • • •			Edges: 7 Directed Graph
Layout %				
Choose a layout Clockwise Rotate	× /	Q		

- 1. In the Layout window, click on the ---Choose a layout button, and choose Force Atlas.
- 2. Click the run button **Run** and a networks should appear in the Graph window.
- 3. If the network is "crunched" it can be expanded in the Force Atlas window as shown below:

File Workspace View	Tools Win	low Pl	lugins Help			
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Attraction strength	1.0					Reset A
	10.0					
Maximum displacement	10.0					Library

- a. Increase the repulsion strength (to 10,000)
- b. Decrease the attraction strength (to 1)
- c. Click the run button again to update
- d. Click the stop button Stop when the nodes stop moving

Colors can be added to the network through the Partition window



- 1. Click the refresh button 🐵
- 2. Choose 'Type' from the drop down menu
- Colors will be randomly assigned for 'Hyperedge' nodes and for 'Variable' nodes
- 4. Click the Apply button Apply to update
- 5. To change the colors, click on one and drag your cursor through the color palette (shown at right)
- 6. Click the Apply button Apply to update



Hyperedge nodes can be made (n	early) invisible through the Ra	anking window	
Gephi 0.8.2 - Project 0			
File Workspace View Tools	Window Plugins Help		
Overview	Data Laboratory	P	
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To show variable labels, click the button for Show Node Labels $oldsymbol{T}$ at the bottom of the Graph window

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- 1. Adjust the font size by clicking the Font Button Arial Bold, 32 or by dragging the text size handle
- 2. "Drag mode" should be enabled (⁽²⁾) by default, so you can also click and drag nodes to optimize the network layout

At this point screenshot image of the network can be captured with the camera button **metric**. If higher quality images are desired, they can be created under the Preview tab.

🅼 Gephi 0.8.2 -	Project 0			
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🕐 Presets			Here are so	ome recommended customizations:
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- Nodes			2. Und	er Node Labels, check the box for Show Labels
Border Width	1.0		3. Und	ler Edges, uncheck the box for Curved
Border Color	custom [0,0,0]		4. Und	ler Edge Arrows, change the size to 0.0
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Shorten label			1. In th	he Export window, click the Options button
			2. Add	one- or two-inch margins on all sides
			3. Click	k OK and then Save

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