

Running the Network Analyzer program in R

Once you have finished creating your connectivity or valued matrix in Excel, perform the following tasks:

1. Save your matrix as a .CSV (comma delimited) file.
 - a. From the **File** tab in Excel select **Save As > Browse**.
 - b. Navigate to your working file folder.
 - i. Make sure you put the Network Analyzer program AND your matrix files in the same folder.
 - c. In the Save As popup window, give your file a helpful name.
 - d. Just below where you enter your file name, there is a dropdown menu named **Save as type**. Click on this dropdown menu and select **CSV (comma delimited)** from the list.
 - i. This option is about 15th on the list.
2. Close Excel. If it asks you to save your file in this format, choose **Yes** and go through that routine.
3. Start R.
4. From the Console Window select **File > Change dir...** and navigate to the location of your matrix files and the Network Analyzer program.
5. From the Console Window select **File > Source R code...**
 - a. Click on the Network Analyzer program, then click **Open**.
6. A small popup window will open.
 - a. Choose the matrix function you want to perform and click **OK**.
7. Another popup window will open showing you the files located in your working folder.
 - a. Select the .CSV (comma delimited) matrix file .
8. The Network Analyzer program will run automatically and produce several files with your results. These files are:
 - a. A matrix operation results text file (e.g. connectivity, Shimbelt, valued, etc). This can be imported/opened in Excel to view your results.
 - b. A link results text file. This file sums up the number of times each edge was used and tells you the most important connections. It also can be opened in Excel or a text editor.
 - c. A network indices file that lists the matrix diameter, cyclomatic number, gamma, alpha, etc). This can be opened in a text editor.
9. Due to some issues with R, the matrix operation results column headers are one column off. To fix this:
 - a. Open the results file in Excel.
 - b. Place your cursor in the first cell (1,1).
 - c. Right click and select **Insert...**
 - d. In the popup window select **Shift cells right**.
 - e. Click **OK**.
 - f. Now the column headings line up with the columns correctly.