

Methods

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Function setup -> `graph_from_data_frame()`

- 1) We used 'directed = False' (this is Undirected network) since Source (main author) and Target (co-authors) are not meaningful. <https://www.jessesadler.com/post/network-analysis-with-r/>

Directed and Undirected definition: <https://ona-book.org/working.html>

Many papers on coauthorship analysis use Undirected network:

- 1- Azondekon, R., Harper, Z. J., Agossa, F. R., Welzig, C. M., & McRoy, S. (2018). Scientific authorship and collaboration network analysis on malaria research in Benin: papers indexed in the web of science (1996–2016). *Global Health Research and Policy*, 3(1), 1-11.
- 2- Han, S. H., Chae, C., & Passmore, D. L. (2019). Social network analysis and social capital in human resource development research: A practical introduction to R use. *Human Resource Development Quarterly*, 30(2), 219-243.
- 3- Ho, T. M., Nguyen, H. V., Vuong, T. T., Dam, Q. M., Pham, H. H., & Vuong, Q. H. (2017). Exploring Vietnamese co-authorship patterns in social sciences with basic network measures of 2008-2017 Scopus data. *F1000Research*, 6.
- 4- Medina, A. M. (2018). Why do ecologists search for co-authorships? Patterns of co-authorship networks in ecology (1977–2016). *Scientometrics*, 116(3), 1853-1865.

Find duplicate in a column

`duplicated(df$column)`

Centrality

Homophily

Values less than 1 indicate stronger subgroup cohesion than would be expected in a random network (i.e., homophily), and values higher than 1 represent higher than expected rates of collaboration (i.e., heterophily).

References

<https://www.r-bloggers.com/2017/05/network-analysis-of-game-of-thrones-family-ties/>

https://www.jstor.org/stable/pdf/26447831.pdf?refreqid=excelsior%3A5e716af69759e46e51fc7561026d4596&ab_segments=&origin=

<https://rpubs.com/MarkusLoew/226759>

<https://rpubs.com/nr2462/845876>

<https://igraph.org/r/html/latest/>