

R-basics, Value comparisons, special constants, vectors, Factors, Matrices & Arrays, List, Data frames, Flow control and loops, R plots and colors, R troubleshooting, Create networks, Edge, vertex and network attributes, specific graphs and graph models, edgelist, matrix, Turning networks into igraph objects, Plotting parameters, Network layouts, improving network plots, Interactive plotting with tkplot, other ways to represent a network, plotting two-mode networks with igraph, Density, reciprocity, transitivity, diameter, node degrees, degree distribution, centrality & centralization, Hubs and authorities, Distances and paths, Subgroups and communities, Cliques, community detection, K-core decomposition, Assortativity and Homophily

TEXT BOOKS/ REFERENCES:

1. Felix Alvaro, '*Easy R programming for Beginners*', Createspace Independent Publishers, May 2016
2. Jared Lander, '*R for non-Statisticians*', Pearson Education, 2014.
3. Katherine Ognyanova, '*Network Analysis and Visualization with R and igraph*' (www.kateto.net)