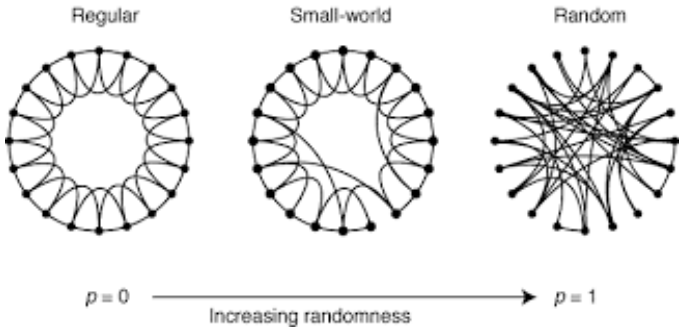
Which Social Media Platform Will Help You Form a Sense of Community?

A UVA Data Science Case Study by Salem Keleta, 2022

Prompt: An investor has approached you for consultation on which social media platform they should invest in to increase their contributions of creating “community like” connections in the virtual world. The investor has done initial research on social networks, using this background research and as the head data science consultant, you have been tasked to determine which social media platform (facebook vs. twitter) incorporates the small world network characteristics. Small world network is the idea that people are connected to one another through their other connections even if it doesn't seem like they’d be connected to some distant person(refer to the visual provided below of small-world networks). Small world network characteristics are present when you have a high clustering coefficient and low average path length. This article will stand as an example of one way to complete network analysis on twitter data, it will walk you through the initial steps of networking analysis using Gephi. On the statistical tab you will have options to run different tests such as the clustering coefficient and low average path length. You will be running an OpenOrd algorithm that deals with large data best. Through the use of network data analysis softwares, create an analysis plan and produce visuals and statistical analysis to determine which social media platform shows small world network characteristics best.



Deliverable: Through the facebook and twitter data provided from Stanford Network Analysis Project (SNAP), produce an analysis plan to determine which social media platform will help you form a sense of community best. Through the use of network analysis software (using OpenOrd algorithm) and following the analysis plan, create visual and use statistical analysis (average clustering coefficient and average path length) to help provide the best recommendation to the investor on which platform they should invest in. Create a brief powerpoint to be presented to your investor explaining your findings and recommendation.