Social Network Analysis for the Management of Information Propagation: A Study on the George Floyd Incident

Nanayakkara A.C.[1*] Kumara B.T.G.S.[2] and Rathnayaka R.M.K.T.[3]

[1]Faculty of Graduate Studies, Sabaragamuwa University of Sri Lanka
[2]Department of Computing and Information Systems, Sabaragamuwa University of Sri Lanka
chethana@ccs.sab.ac.lk

Social Network Analysis (SNA) is a research method which focuses on patterns of relations among people and entities such as organizations and states. They are worthwhile for examining an individual's or organization's social structure and interdependencies (or work patterns). Online SNA is a practical method that can reliably monitor the interactions in an online community. In this study, SNA of a video comment network series of YouTube videos related to a significant and viral incident has been performed. This study analysed the YouTube videos on the death of George Floyd and the uplift of Black Lives Matter. By analysing those video comment networks, it was able to probe a plethora of insights about the netizens, their behaviour and their influence over society. This endeavour will enlighten the path for an arena for policymakers on prevention and countermeasures on manipulations of vox populi. The key players and the discussions they made to continue the issue into a social media viral had been identified by means of social network theory concepts. Several significant relationships were discovered where a specific commenter continually influenced the discussion into the motives which they preferred. The detection of hubs (nodes to point to many other nodes) and key authorities (nodes that are meant to be from many other nodes) will establish the foundation for identifying the motives of comment behaviours. While this analysis looked at relationship weight and node degree, there is still room for further analysis of the social network by analysing centrality measures such as betweenness, closeness, and PageRank.

Keywords: *Authority, Community Detection, Hub, Social Network Analysis, You Tube comments*