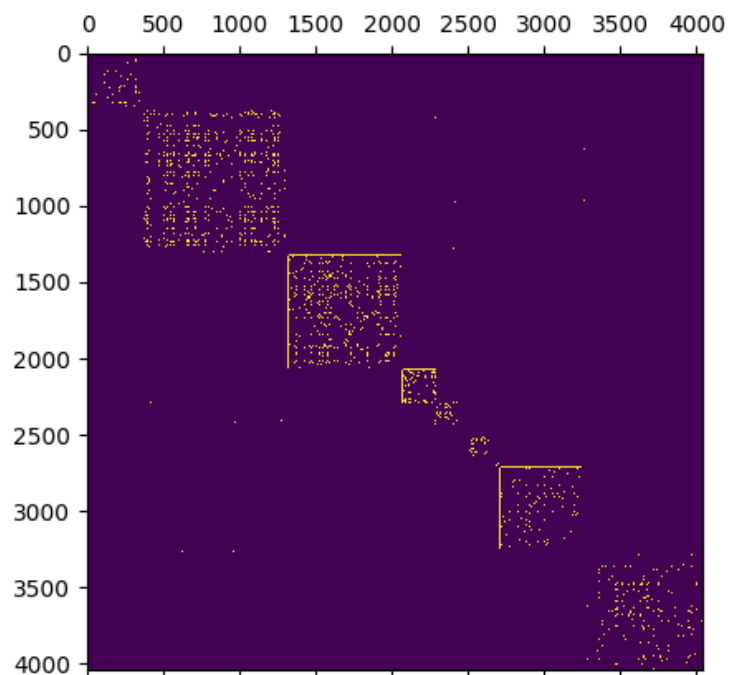
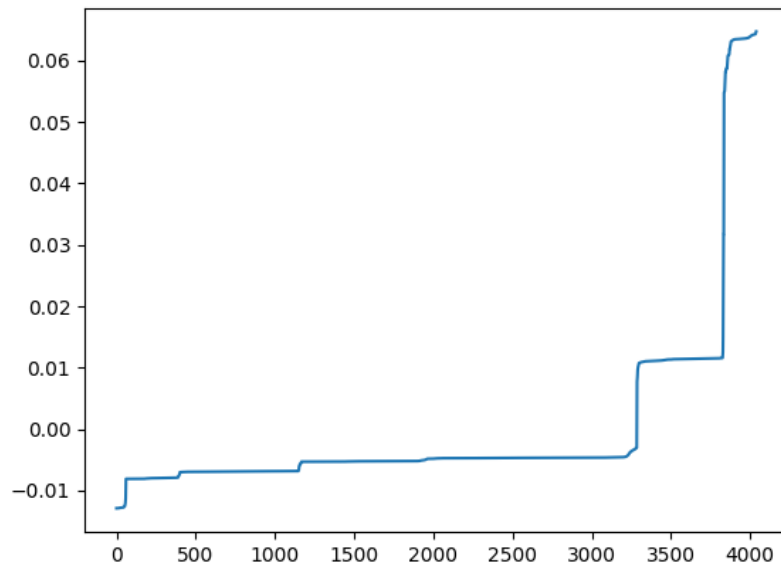
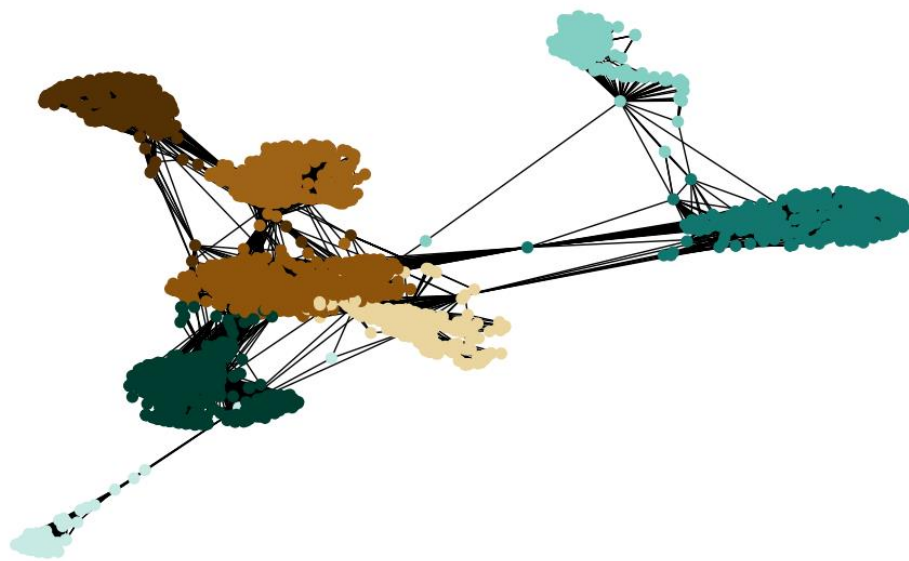


Data Analytics – Assignment3 Report

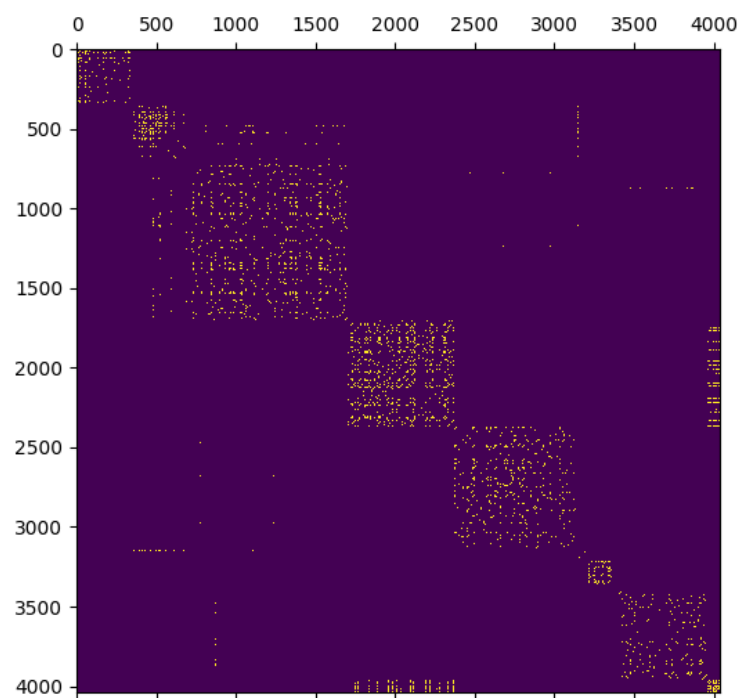
By: - Vedpal Jangir SrNo:- 19299

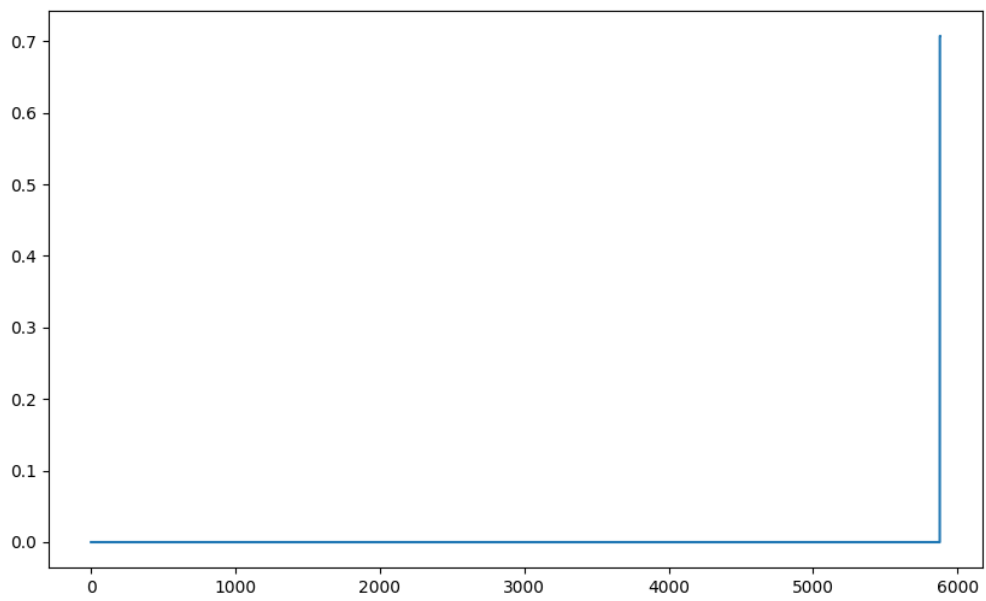
The Fiedler vector plot, sorted adjacency matrix and graph partition plot for Facebook dataset can be visualized as follows: -



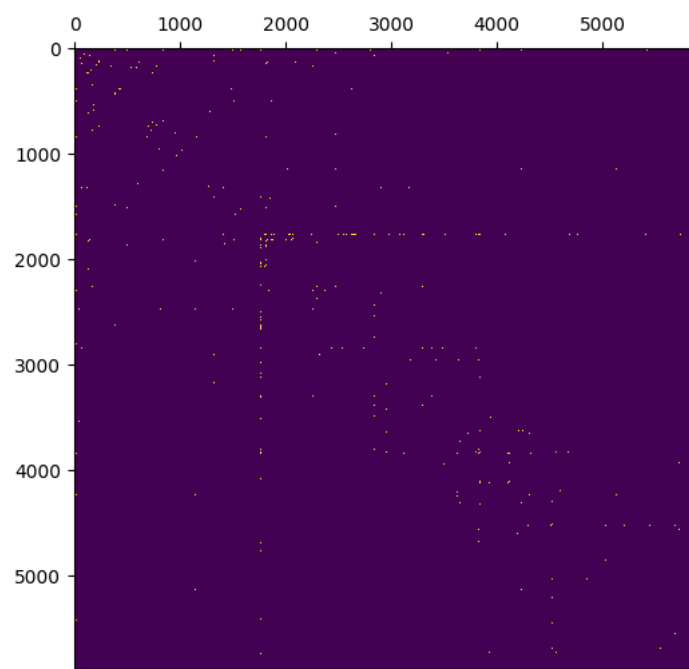
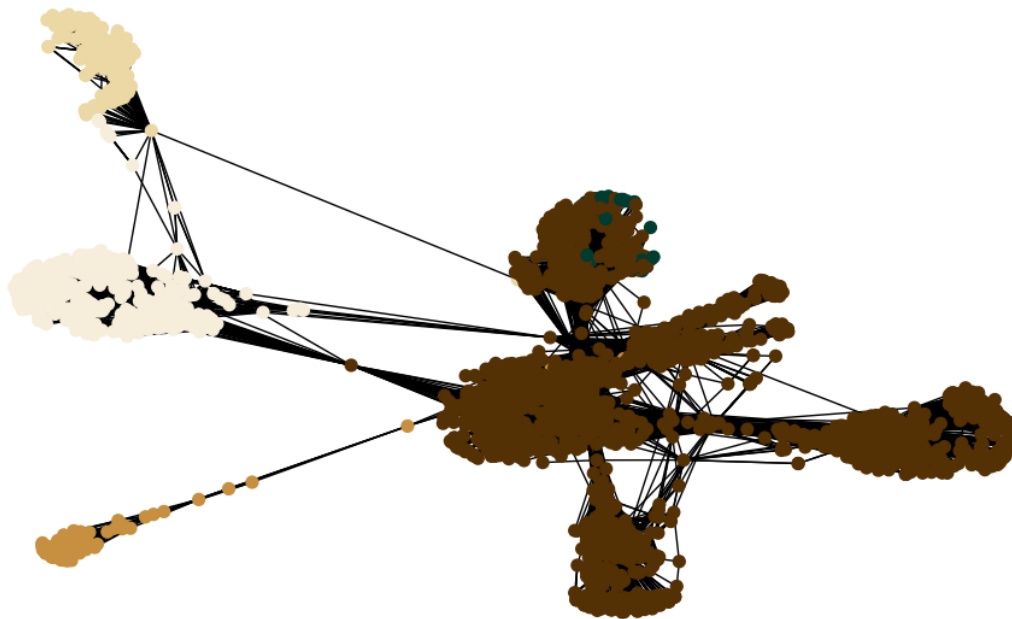


The Fiedler vector plot, sorted adjacency matrix and graph partition plot for bitcoin dataset can be visualized as follows: -

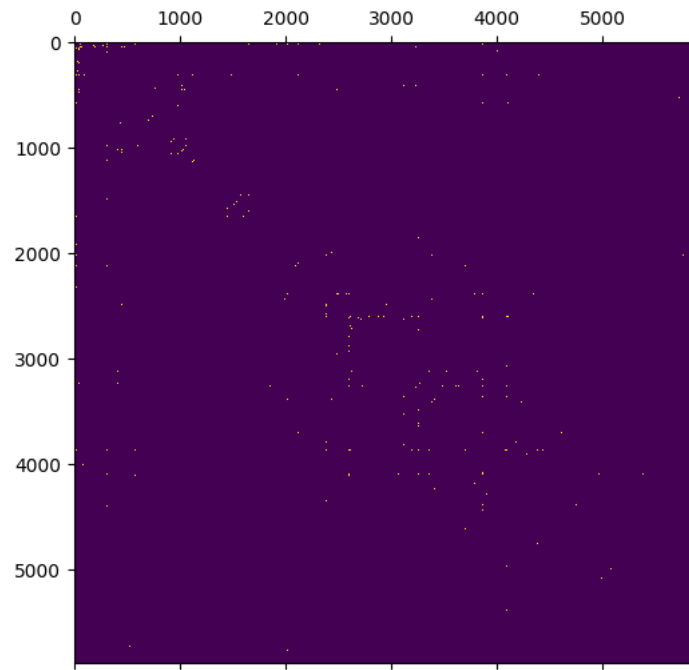




The Louvain decomposition gives the following output for the Facebook dataset:-



The Louvain decomposition gives the following output for the Bitcoin dataset: -



The runtime for spectral decomposition came out to be 37 seconds for fb dataset and 38 seconds for bitcoin dataset.

The runtime for Louvain decomposition came out to be 17 seconds for fb dataset and 8 seconds for bitcoin dataset.

In my opinion spectral decomposition performs better than the Louvain method as analysed visually.