



## Title - Social Media Network Analysis Application

**Description** - Networks Analysis of the connection of users on social media can give us great insight and have a decisive influence on events. We developed a Full-stack application for network analysis and data Visualization that enables us to predict results & analyze networks.

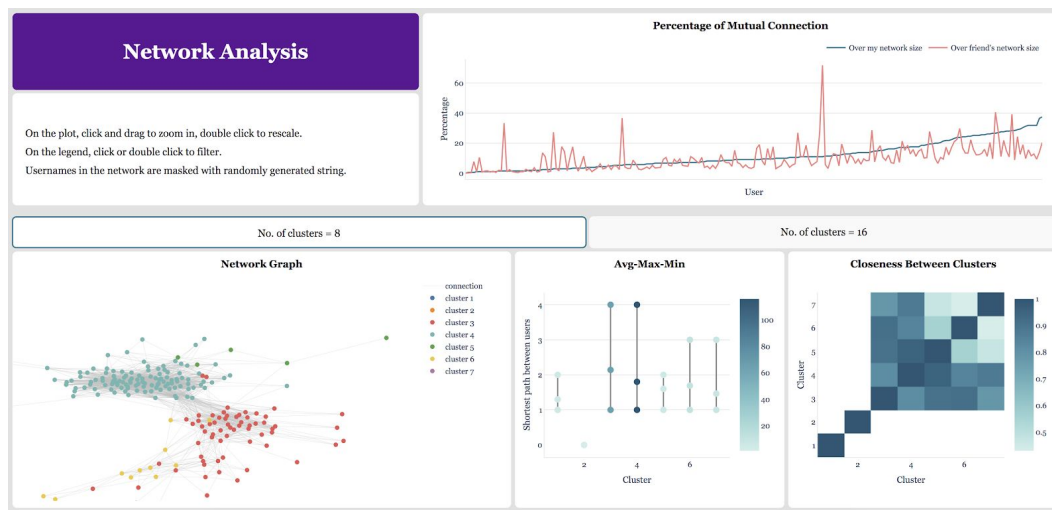
### Frontend Details and Features

#### 1. HTML, CSS, JS -

- HTML is used to make the basic structure of the website
- CSS is used to add styling to the website.
- JavaScript is used to make the website more interactive.

#### 2. Plotly : Plotly was used to plot all the graphs as shown in the screenshot below. Below are the list of features showcased using Plotly -

- Clustering & closeness inspection** - We also visualize the k-means clustering algorithm to detect sub-groups or communities within the network. We also integrated the backend API for the dynamic data using the cluster.json received from the backend API.
- Closeness Analysis** - Shortest path algorithms over the dynamic data to find the distance between 2 users or clusters. The results for the was obtained using such as Floyd Warshall as written and further displayed using the was shown by a heatmap shown in the figure given below.



#### 3. AJAX : Ajax was used to send and retrieve data from a server asynchronously. The services written can be used as an & when the component life cycle is initialized in the client browser.