

TI2 requirement.

SocialWave is a social media application that aims to connect people and foster interactions within a virtual community. It provides users with a platform to share content, communicate, and build relationships with others. However, the app currently faces some challenges in terms of its functionality and user experience. The main problems in the SocialWave social network revolve around the lack of certain crucial functionalities. As are the following:

1. Search for mutual friends.
 - a. BFS search algorithm. Identify neighbors on both nodes and compare the lists to find mutual friends.
2. Analysis of social influence.
 - a. Dijkstra's algorithm. Calculates the shortest distance between a node and all the others in the graph, this allows us to obtain metrics and closeness, therefore, analyze the social influence of users.
3. Recommendation of friendship connections.
 - a. Prim's algorithm. Using the minimal spanning tree algorithm, you can recommend friendship connections between users who don't know each other yet, but have common interests or connections. With the algorithm it finds the most relevant connections and suggest users to connect. This can help foster new friendships and expand users' social networks.