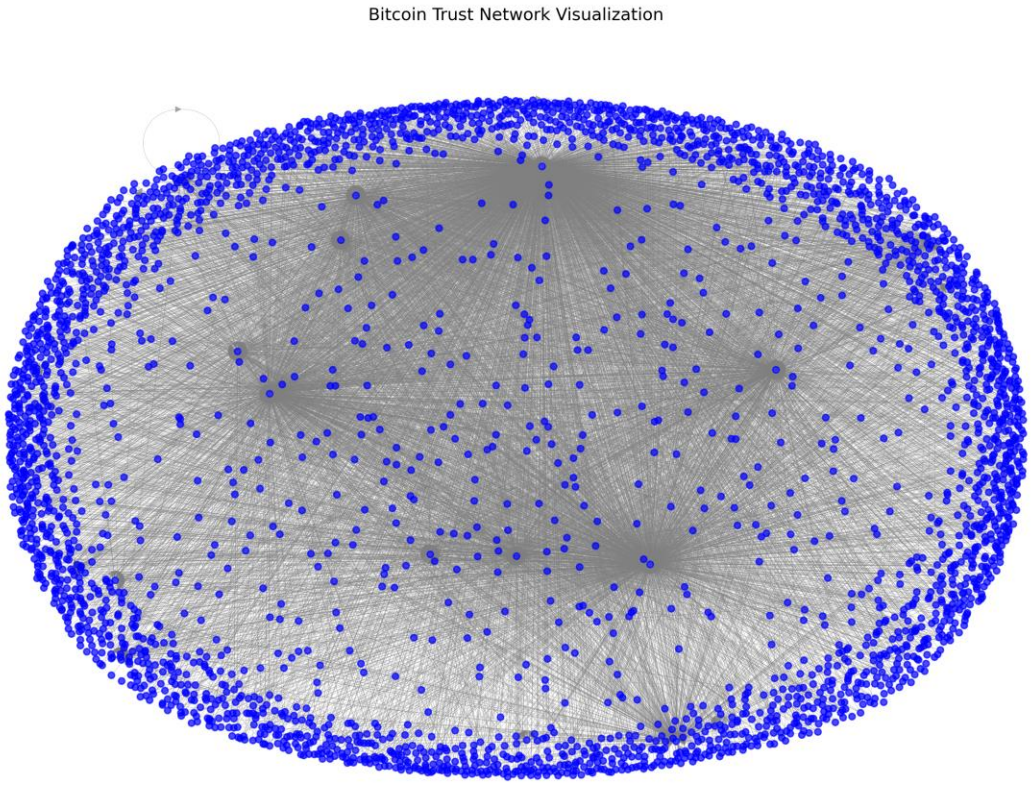
Lab Assignment 1

Write answers in this word file and upload on Blackboard.

1. Visit snap.stanford.edu and identify a domain you are interested in. From the domain choose a dataset that is available and download it. Write in 80-100 words what is your motivation/reason to choose this dataset.
   The Bitcoin Alpha trading platform dataset was selected because it provides fascinating insights into trust dynamics between users. The platform's rating system, which allows users to score each other from -10 to +10, creates a comprehensive picture of trust and distrust patterns in cryptocurrency trading. By analyzing these relationships, we can better understand how to detect fraudulent behavior and enhance security measures on similar platforms. This dataset is particularly valuable as it represents one of the earliest examples of a directed network that includes weighted positive and negative connections, making it an ideal resource for studying reputation systems and trust relationships in digital currency communities.
2. Write code to visualize the dataset as a graph. You may use codes available on SNAP for this. Paste a picture of the graph.



3. Compute the following –
   a. Maximum node degree in case of undirected graphs - 2667

b. Maximum in-degree and out-degree in case of directed graphs:
   - Maximum in-degree: 2665
   - Maximum out-degree: 17
c. Average clustering coefficient of the graph - 0.4275