**DATA 620 – Assignment4**

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**Dataset: Bitcoin Alpha trust weighted signed network**

This is who-trusts-whom network of people who trade using Bitcoin on a platform called [Bitcoin Alpha](http://www.btcalpha.com/). Since Bitcoin users are anonymous, there is a need to maintain a record of users' reputation to prevent transactions with fraudulent and risky users. Members of Bitcoin Alpha rate other members in a scale of -10 (total distrust) to +10 (total trust) in steps of 1. This is the first explicit weighted signed directed network available for research.

<https://snap.stanford.edu/data/soc-sign-bitcoinalpha.html>

**Project:**

For the purpose of this project, we will analyze the network, centrality and other characteristics.

**Nodes:** 3,783

**Edges:**  24,186

**Categorical Variables:** rating is our categorical variable which is numeric and range from -10 to 10.

**Loading:**

Data is in csv format and will be loaded via python. It has the following four columns SOURCE, TARGET, RATING, TIME.

**Analyzing:**

we will analyze the Degreeness, Closeness and Betweenness of users using the NetworkX package and functions.

**Potential Outcomes:**

1. How the network differs based on ratings?
2. Which rating has more density?
3. What does centrality explain for bitcoin?