

MRP Project Proposal

(Data Science Masters, Ryerson University)

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Graph Perspective of Stock Market Behaviour

It is observed that in stock market certain pair of stocks moves together in the same direction while certain pair of stocks moves in the opposite direction. Based on these **correlated movement and the relative strength of the movements**, the stocks can be assumed to have a connection among them. Using these connections we could form a **Weighted Graph**, which could reveal the Stocks that moves together. In this project we intend to explore various properties of these networks as well as dynamics. Also If time permits we could form some stochastic/geometric models to try to mimic real-world networks or processes that occurs in them.

We intend to use **Yahoo Price Data that is publicly available over the web.**

Sample Query Link for the Data :

<https://query1.finance.yahoo.com/v7/finance/download/IBM?period1=1492001531&period2=1494593531&interval=1d&events=history&crumb=/.GRYUGYjeM>

<https://finance.yahoo.com/quote/IBM/history?p=IBM>