Group 13

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Outline:

With the recent outbreak of the coronavirus, many schools have been closed. Several news articles about stocks in the USA and European countries have been debated a lot online recently because of the abnormal situation of the stock market. Due to the inspiration of these articles, as students majoring in economics, our group members are eager to explore the impacts of coronavirus on the economy, and the stock market can serve as our economic measure.

We know that the stock can fluctuate very frequently during a period, but the coronavirus will last at least three to four more months (according to news articles on the internet by some experts). Maybe we could predict the trend of the stock in the following month based on existing data. It might not be very true due to the success of the treatment of coronavirus and some related policies put into effect in some countries, but we could learn from this data and experience.

Our Project is to analyze the effects of coronavirus on the stock market. We will compare the stock situation of different countries and different companies. We will do some analysis based on data that we download from the Internet and we will try to find answers to our questions.

Five questions:

1. Is there any relationship between coronavirus and stock (Apple, Google, Huawei, oil, Gold…)? How is the relationship (negative or positive)?
2. Is the relationship between coronavirus and stock consistent in different regions (developed and developing countries)?
3. Can we use K-nn model or tree-based model to find characteristics of regions that have more confirmed cases of coronavirus?
4. Will the prediction of stock in the next month based on data after the outbreak of coronavirus be different from the prediction based on data before the outbreak of coronavirus? How? When would the stock become normal?
5. What is the conclusion by analyzing these data?

Our data are from the following link:

1. <https://finance.yahoo.com/>
2. <https://finance.yahoo.com/quote/AAPL/history/> (Apple stock)
3. <https://www.investing.com/equities/huawei-culture-historical-data> (Huawei stock)
4. <https://eoddata.com/download.aspx> (stock market)
5. <https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6> (information about coronavirus (by country))