Project Proposal Saudi Stock Exchange

* **Abstract:**

Stock Market Analysis and Prediction is the project related to exploratory data analysis (EDA), data visualization and Predictive analysis using data, provided by Saudi stock market companies. It was collected from Saudi Stock Exchange (Tadawul) since 2000. Tadawul is the Saudi Exchange is a fully owned subsidiary by Saudi Tadawul Group. As Saudi Arabia’s dedicated stock exchange and the largest stock exchange in the Middle East. All data used in this project from<https://www.kaggle.com/salwaalzahrani/saudi-stock-exchange-tadawul>.

* **Question/Problem statement:**

We'll be answering the following questions along the way:

What was the change in each price of the stock over 20 years?

What was the correlation between different stocks ‘yearly returns?

What was the moving average of the various stocks?

Looking at the U.S. stock market we can see that the market was already in decline in response to growing uncertainty around COVID-19 by mid-March 2020. In particular Saudi stock market, too. So, the question is to find how various industries represented by stock market indices have reacted to the COVID-19 shock and consequently which sectors turned out to keep stability and remained resistant to the pandemic in Saudi Stock Exchange?

* **Content:**

Data size (no. of rows, and no. of columns) 6993 Rows and 14 Columns. Each row in the database represents the price of a specific stock at a specific date:

|  |  |  |
| --- | --- | --- |
| symbol | Integer | The symbol or the reference number of the company |
| name | String | Name of the company |
| trading\_name | String | The trading name of the company |
| sector | String | The sector in which the company operates |
| date | String | The date of the stock price |
| open | Decimal | The opening price |
| high | Decimal | The highest price of the stock at that day |
| low | Decimal | The lowest price of the stock at that day |
| close | Decimal | The closing price |
| change | Decimal | The change in price from the last day |
| perc \_Change | Decimal | The percentage of the change |
| volume\_traded | Decimal | The volume of the trades for the day |
| value\_traded | Decimal | The value of the trades for the day |
| no\_trades | Decimal | The number of trades for the day |

* **Tools:**
* Programs: SQLlite, Spyder, DB browser.
* Libraries: Pandas, Matplotlib, Seaborn and NumPy.
* Functions: Group by, Join, count, and others functions in python.
* Plots: Bar graph, forecast, bar chart, and stock price prediction.
* **MVP Goal:**

The goal of this project is to better understand which factors are most important in Saudi Stock Exchange over 20 years. Using data science in the stock market, especially in Saudi Arabia is an interesting study because it needs to be explored and studied deeply.