

Stock Market Analysis

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Profile

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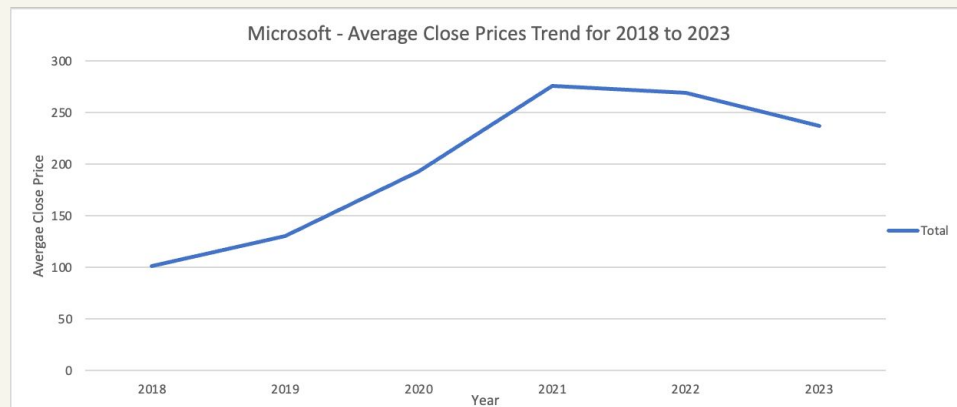
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Microsoft - Close Price Trend over the Years

- Average Close Prices have been significantly rising till 2021.
- The graph shows a slight decrease in average closing prices of stocks from 2021 to 2022.
- From 2022 to 2023, the stock drops by a higher amount.
- The overall trend shows that the closing prices see a high increase from 2018 to 2021 and a slight drop from 2021 to 2023.



Year	Average of Close Price
+ 2018	101.0339841
+ 2019	130.382024
+ 2020	193.0261264
+ 2021	275.9407538
+ 2022	268.9170913
+ 2023	236.7268421
Grand Total	194.5105477

Tesla - Close Price Trend over the Years



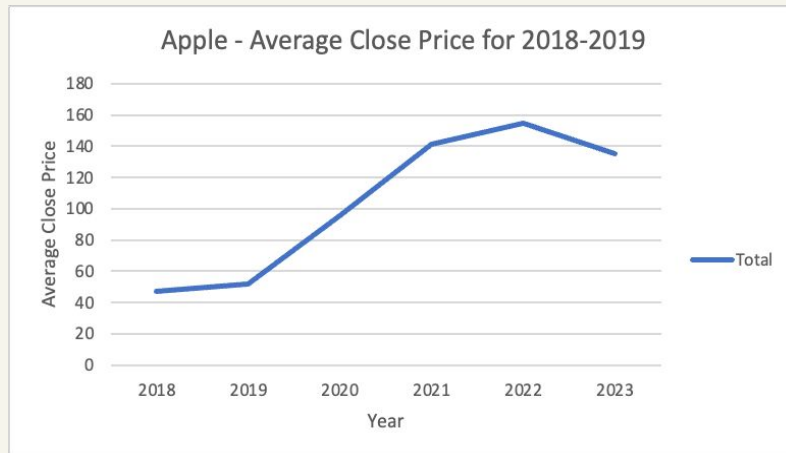
- The average closing prices see a significant rise from 2018 to 2021.
- From 2021 to 2022, we see a slight increase of average stock closing prices.
- The average closing prices decrease significantly from 2022 to 2023.
- The overall trend shows a sharp increase from 2018 to 2021, with 2021 to 2022 fairly constant and then a significant drop from 2022 to 2023.

Year	Average of Close Price
2018	21.15399467
2019	18.23534658
2020	96.66568879
2021	259.9981617
2022	263.093081
2023	132.1421043
Grand Total	131.7902812

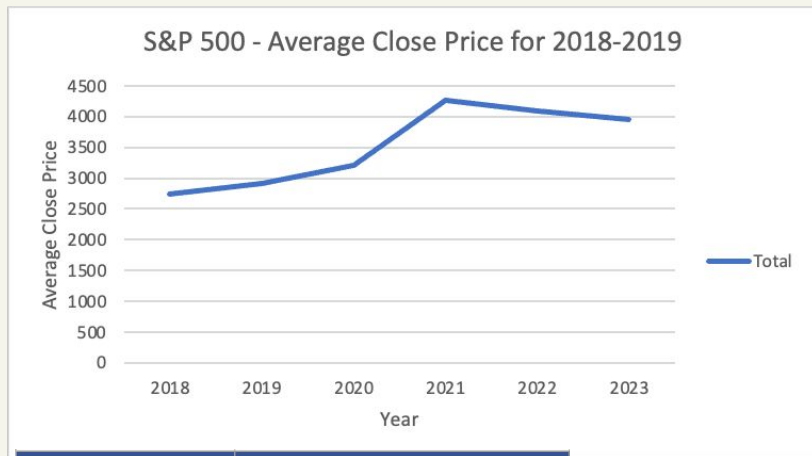
Apple - Close Price over the Years

- The average close prices increase from 2018 to 2022.
- From 2022 to 2023, we see a drop in the stocks of average closing price.
- The overall trend shows an increase in stock prices from 2018 to 2022 and then a decrease from 2022 to 2023.

Year	Average of Close Price
2018	47.2633567
2019	52.06398806
2020	95.34707489
2021	140.9893652
2022	154.8350597
2023	135.3310524
Grand Total	98.64651602



S&P 500 - Close Price Trend over the Years

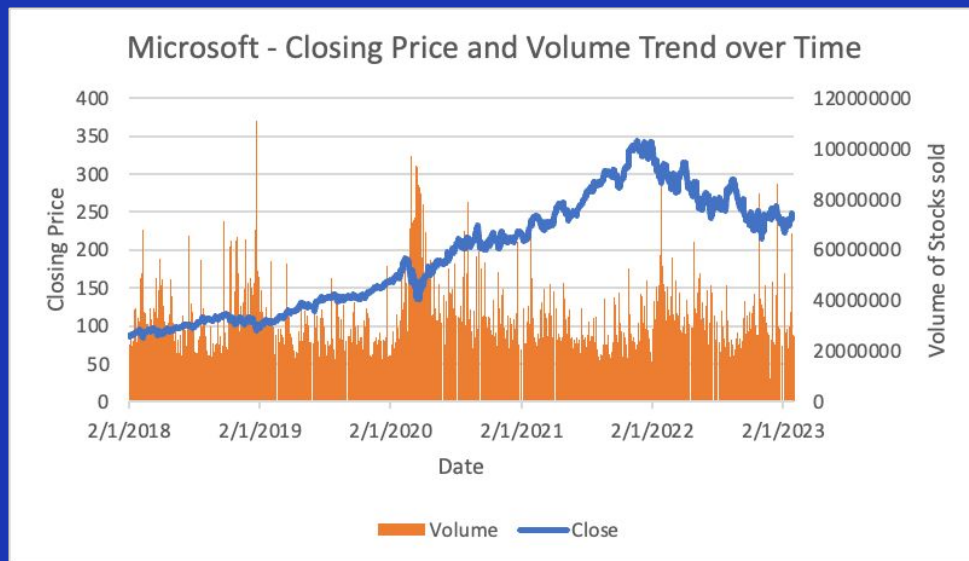


- The average closing prices see a significant rise from 2018 to 2021.
- From 2021 to 2023, we see a slight decrease of average stock closing prices.
- The overall trend shows an increase from 2018 to 2021, with a small drop from 2021 to 2023.

Years	Average of Close Price
+ 2018	2746.214183
+ 2019	2913.356389
+ 2020	3217.85585
+ 2021	4273.385635
+ 2022	4098.514741
+ 2023	3954.554211
Grand Total	3457.230055

Microsoft - Closing Price and Volume

- The closing prices see an overall increase from 2018 to 2023.
- The Volume of stocks sold varies throughout the years, with a consistent high period during the mid 2020s.



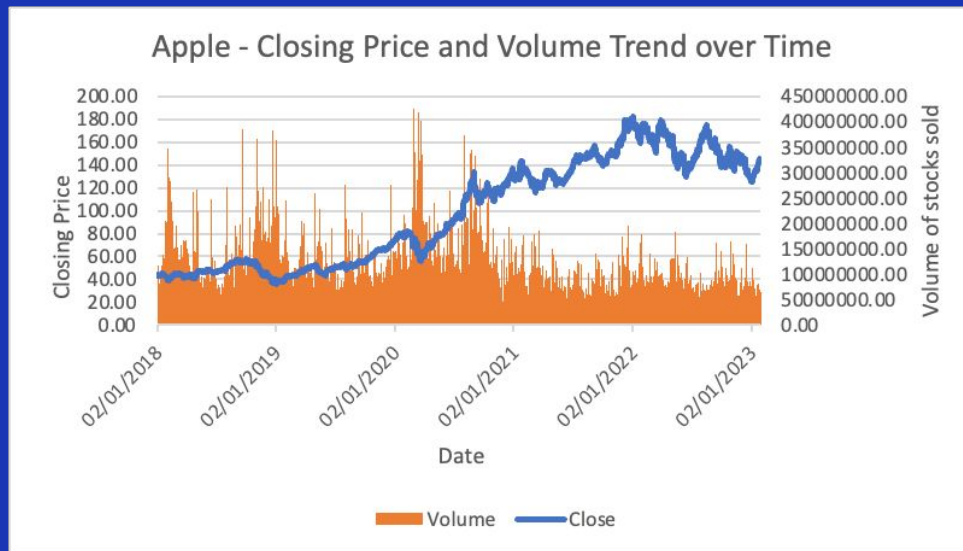
Tesla - Closing Price and Volume



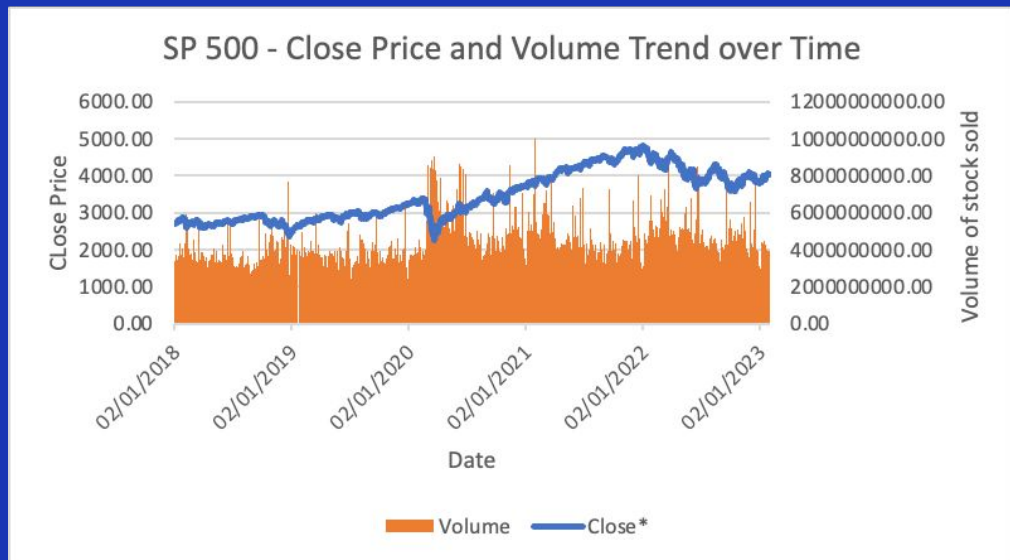
- The closing prices see an overall increase from 2018 to 2023, with varying prices from 2021 to 2023.
- The Volume of stocks sold varies throughout the years, with a consistent low period during the mid 2021 to the end of 2022.

Apple - Closing Price and Volume

- The closing prices see an overall increase from 2018 to 2023.
- The Volume of stocks sold varies throughout the years, with higher varying amounts sold during 2018 to 2021 and a lower consistent rate from 2021 to 2023.



S&P 500 - Closing Price and Volume

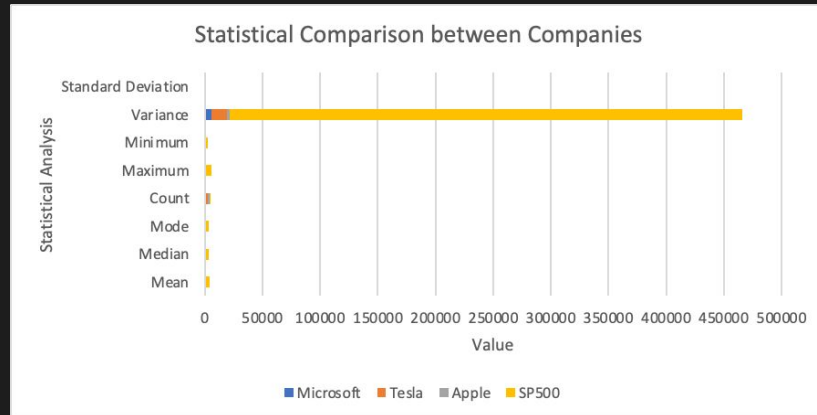


- The closing prices see an overall increase from 2018 to 2023.
- The Volume of stocks sold varies throughout the years.

Statistical Analysis between the Companies

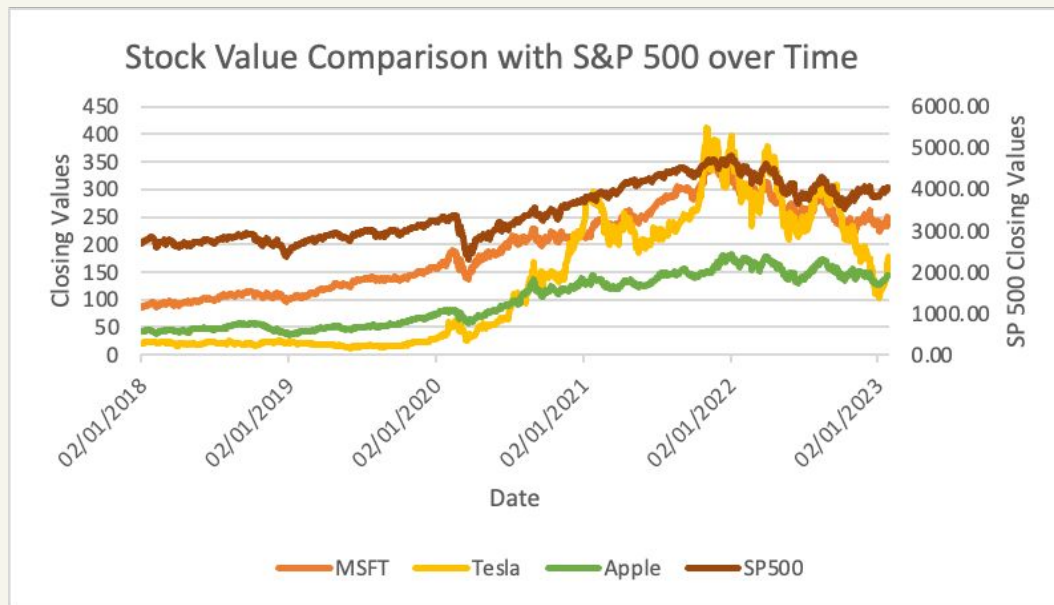
Statistical Analysis ▼	Microsoft ▼	Tesla ▼	Apple ▼	SP500 ▼
Mean	194.4708998	131.8952112	98.57410424	3457.034092
Median	203.580002	96.573334	95.0874975	3294.67
Mode	95.139999	24	127.82	2832.41
Count	1278	1278	1278	1278
Maximum	344.619995	411.470001	182.630005	4804.51
Minimum	86.059998	12.073333	35.994999	2290.71
Variance	5510.448676	13728.00737	2132.235501	444300.9421
Standard Deviation	74.23239641	117.1665796	46.17613562	666.5590312

- S&P 500 has the highest average closing prices at 3457.03 while Apple has the lowest at 98.54, Tesla has 131.89 and Apple has 98.57
- S&P 500 has the highest median value, with Microsoft coming at second at 203.58, then Tesla at 96.57 and lastly, Apple at 95.09
- The mode for S&P 500 is the highest at 2832.41 and 24 being the lowest for Tesla.
- The maximum and minimum value for S&P 500 is 4804.51 and 2290.71, 344.61 and 86.05 for Microsoft, 411.47 and 12.07 for Tesla and 182.63 and 35.99 for Apple.
- S&P 500 has the highest variance while Apple has the lowest.
- The standard deviation is the lowest for Microsoft and highest for S&P 500 at 74.23 and 666.56 consecutively.



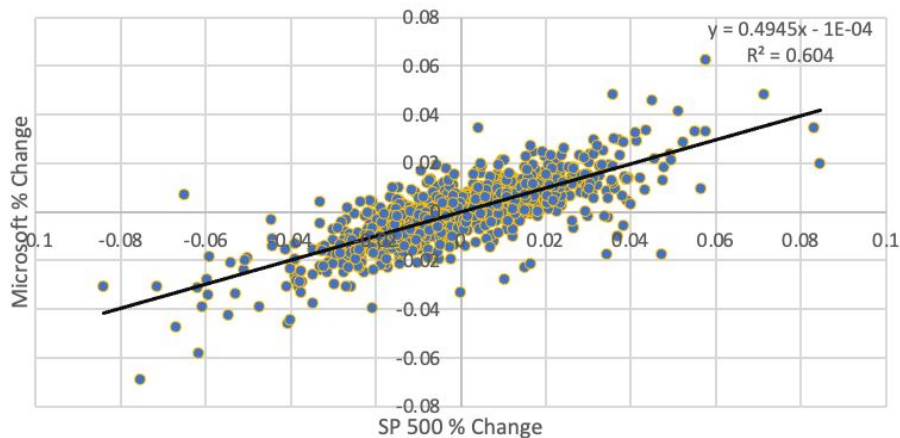
Comparing Stock values with S&P 500 over the Years

- The stock closing prices of all the companies show an overall increase from 2018 to 2019.
- Tesla showed a sharp increase in closing prices from 2020 to 2021, while Microsoft, Apple and S&P 500 showed more consistent growth.
- Microsoft and Apple show a consistent increase when compared to Tesla during 2021 to 2023.
- Microsoft and Apple follow the growth of S&P 500 more closely than Tesla.



Regression Analysis on Microsoft compared to S&P 500

Regression Analysis on Microsoft compared to SP 500

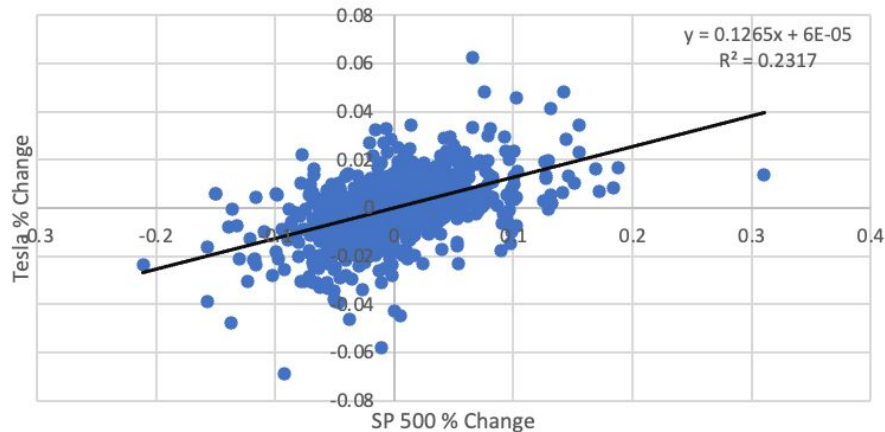


- Beta measures how much Microsoft moves relative to the market.
- If S&P 500 increases by 1%, Microsoft increases by 0.49%.
- Microsoft is **less volatile** than the overall market.
- R^2 shows how much of Microsoft's movement is explained by the S&P 500.
- **60.4%** of Microsoft's price changes are driven by S&P 500 changes.

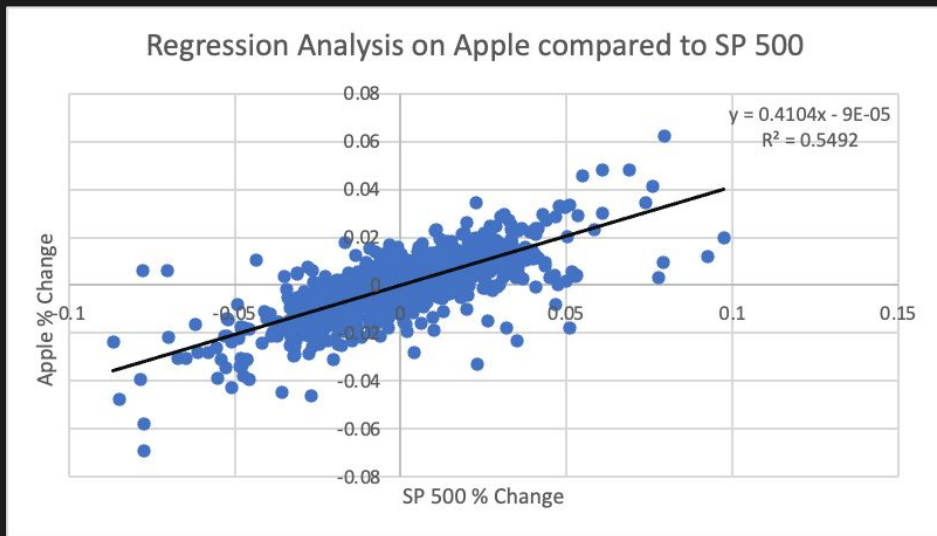
Regression Analysis on Tesla compared to S&P 500

- Beta measures how much Tesla moves relative to the market.
- If S&P 500 increases by 1%, Tesla increases by 0.126%.
- Tesla is **less volatile** than the overall market.
- R^2 shows how much of Tesla's movement is explained by the S&P 500.
- **23%** of Tesla's price changes are driven by S&P 500 changes.

Regression Analysis on Tesla compared to SP 500



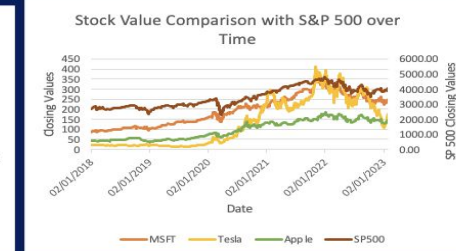
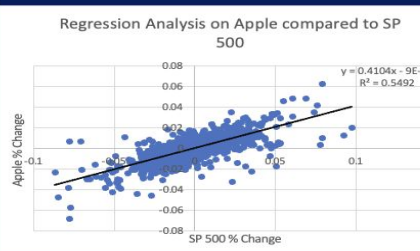
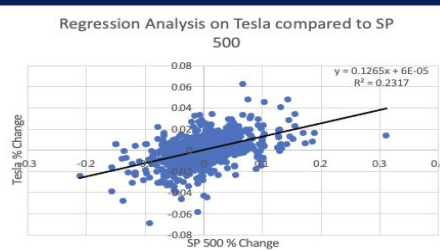
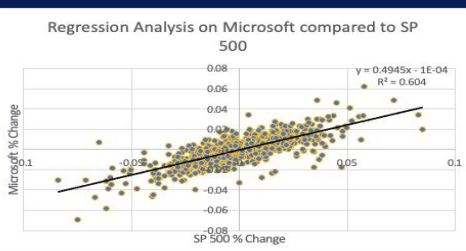
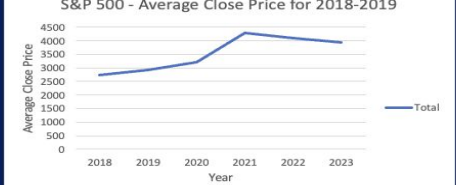
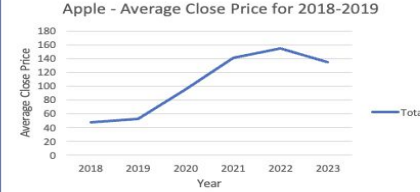
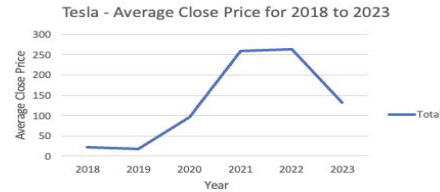
Regression Analysis on Apple compared to S&P 500



- Beta measures how much Apple moves relative to the market.
- If S&P 500 increases by 1%, Apple increases by 0.41%.
- Apple is **less volatile** than the overall market.
- R^2 shows how much of Apple's movement is explained by the S&P 500.
- **54.9%** of Apple's price changes are driven by S&P 500 changes.

Stock Market Analysis Dashboard

Company	Mean	Median	Mode	Count	Maximum	Minimum	Variance	Standard Deviation
Microsoft	194.4708998	203.580002	95.139999	1278	344.619995	86.059998	5510.448676	74.23239641
Tesla	131.8952112	96.573334	24	1278	411.470001	12.073333	13728.00737	117.1665796
Apple	98.57410424	95.0874975	127.82	1278	182.630005	35.994999	2132.235501	46.17613562
SP500	3457.034092	3294.67	2832.41	1278	4804.51	2290.71	444300.9421	666.5590312





Thank You