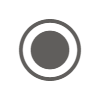
**Call with DSCI 521 Summer-20230903\_232233-Meeting Recording**

September 3, 2023, 3:22AM

12m 58s

 **Vemula,Vijval** started transcription

 **Vemula,Vijval** 0:06  
Yeah.  
Yeah.  
So hello everyone, this is vijval from 521.  
So we are here to present our BFI 21 project, which is extensive EDA on Apple stock prices.  
So we have collected the data from Kaggle.  
We have a CSV file.  
There we downloaded the data from there and this stock prices range from 1980 to 2022.  
So this is the outline of our presentation.  
So we will explore a number of features for this presentation.  
Ohh first the direction like we do have the data set like as I have said before we have the dates from 1980 to 2022 and what we expect from this EDA is like find out patterns, find out how.  
Things are related how the prices are related to uh external features like, you know, a change in the CEO exit etcetera.

 **Patil,Priyanka** 1:32  
Frances logging.

 **Vemula,Vijval** 1:36  
Umm and coming to the data we have.  
Uh, we have like A6.

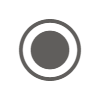
 **Patil,Priyanka** 1:43  
OK, when she leaves the traditions and the boys Michael statistics.

 **Vemula,Vijval** 1:48  
Uh, Priyanka, you're on now.  
Yeah, yeah.  
Coming to data exploration like we have 7 columns.  
Uh, we have date open, high, low, uh, close, adjusted close and volume columns.  
So these things are the uh prizes for this date at that particular date.  
And for data visualization we have used like scatter plots and line plots to better visualize the summary, we have the CSV file we have and the next part is this summary statistics.  
So this is the summary statistics that we have from our CSV file.  
We don't have any null values here.  
It means like the data is pretty much clean and we do have like a a 10,468 the uh rows and obviously 6 columns out of which uh the 7th one is the data date column which is given as an index.  
So as you can see from 1980 to uh 2022, the apple price has increased rapidly.  
The stock prices beat close, high or adjusted close anything.  
They're much correlated to each other.  
They have encouraged very much from 2000.  
Of five to 2022.  
That is because but uh, the branding of Apple is very high in the United States and thereby this has reflected very much in the world too, like for example in my country, which is India having uh products related to Apple is like your some special you have some special kind of status there.  
So these are the events that have contributed to this rapid increase in the stock prices.  
And next, I think my teammate Aiden will continue.

 **Ordonez,Adan** 4:13  
Perfect.  
So I'm going to be talking about daily return, daily return on the stock is used to measure the day to day performance of stocks.  
So for example, the price of stocks as today's closure compared to the process, the same stock at yesterday's closure, just to put an example, positive daily return means appreciation and stock price on daily comparison.  
So daily returns provide insights into short term price movements, analyzing volatility and trends in daily returns is essential for investors, decision making and daily returns.  
Analysis AIDS and risk management and strategy.  
Formulation.  
In Apple's case, the investment has a small positive daily return, which represents a relatively stable performance over time.  
Moving on, I'm going to be talking about outliers.  
Outlier detection is the process of detecting outliers or a data point that has far away from the average in this scatter plot, you can observe that Apple stock is not very volatile and does not have many outliers.  
But does that mean this can mean that this stock is low risk and it's easier to predict the future?  
The stock this kind of plot indicates also that there will not be many outliers in the future.

 **Brenner,Tyler** 5:31  
So for seasonal patterns in the seasonal plot table that's below, you could see that the stock is constantly changing with the seasons going up and down every September.  
Apple actually hosts an event where they launched their new products and the stock actually rises.  
But then, as the new year hits, the stock starts to fall and it appears to actually start to rise again around the Q1 earnings.  
When those are announced, umm.  
Then for the rest of the year, it continues to rise and then moving forward, I did correlation analysis.  
So what I did was I took Apple stock and I compared it to the S&P 500.  
As you can see, it's basically a perfect linear correlation actually ran the correlation coefficient and it came out to be one.  
You can notice that there's not many outliers here, umm, and many of the points are actually clustered along that linear line and you would be able to tell if it didn't have a good correlation if it was more scattered around and the plots that are in the middle of that linear line, those have a stronger connection whereas the ones outside the outliers have a weaker connection between the two.  
And I also did the moving averages.  
So what I did here was I took Apple stock price and I compared it to the 50 day moving average and the 200 day moving average from the start until 2008.  
And what it does is it indicated that the market was was in a period of balance because if you notice from 1980 until 2008, it was basically at the the 50 day and the 200 day moving average or at the exact same level as the Apple stock price.  
So what that kind of meant was that it was a period of balance and the amount of buyers and sellers of the stock matched, which led to the actual lack of significant price movement.  
But then you'll notice from 2008 until 2021, the stock was actually higher than both the moving averages, the 50 day and the 200 day.  
And what that indicated basically was that the stock was in an uptrend phase, but from 21 on 2021 on the moving averages were actually higher than the stock price.  
And this actually can indicate that the stock may see a downtrend.  
Which would suggest that the recent performance of the stock has actually been weaker and it's lagging its historical averages and because of that, traders may interpret these moving averages as barriers that stocks need to actually overcome to regain the bullish momentum of going back up.

 **Patil,Priyanka** 8:23  
Also, volume analysis is.  
Uh, which involves looking at the number of shares or contract traded for a security over a given time period.  
It is issue to give market interest activity in a stock uh.  
So based on the uh interest, like while I'm reflects the number of shares traded during the specific time, if people are buying more than then there is high volume during the price increase which indicates strong buying interest.  
Sorry.  
Uh, and if volume is less than it, it shows that people has less traded it and it it shows less interest in in the stock significant volumes.  
Uh, Spike can indicate you of important market events.  
Next week.  
The volatility volatility analysis indicates charts or graph illustrating measures of volatility, examples, standard deviation, or historical volatility.  
It is crucial for assessing risk and potential returns.  
High volatility can offer opportunity, but requires cautions and low volatility may appeal to those seeking stability and long term growth and standard deviation as per the Apple stock price increase is shown in the figure, it is pretty much good next line.  
And the technical indicator it displays featuring technical indicators like RSI, it is relative strength index, moving, average convergence, divergent and uh.  
But I not bands traders often use a combination of these indicators for more robust analysis.  
So ADESA values which is above 70 indicates potential overbroad conditions, while if the value is below 30, it suggests potential oversold conditions.  
Uh.  
Similarly, MSCD crossovers.  
Uh can signal potential buying or selling opportunities were brought conditions may signal a potential reversal or correction, suggesting caution for the buyers and similarly, oversold conditions may indicate a potential by opportunities as price good bounce back.  
And these are the graphs for the technical indicator.  
So, uh conclusion of this Apple stock Edu is we have used a preexisted data sets available on Kaggle.  
Ohh so it it it in.  
Sorry, it turns out to be that Apple stock prices have pretty much a given good returns and has increased rapidly from 2010 to 2022.  
So since 2021, the moving dorms have been higher than the stock prices, which can reflect that the stock may be in a decline and that recent performance has lagged behind historical norms.  
It indicates that there is a significant association between the performance of Apple and SP500.  
Given that the correlation coefficient was calculated and came out to be one for further Edu, we can explore more using different graph models like histograms, etcetera.  
No, thank you guys.

 **Vemula,Vijval** stopped transcription