UNIVERSITY OF CENTRAL PUNJAB

FALL-2023

Course Title: Advance business analytics
Course Code: BMK7183

Assignment No. 1

Course Instructor:	Noman Yaqoob		
Section: M1	Program: MBA	Date: 20/11/23	
Submission Date: 26/11/23	Maximum Marks:		
Program Objective:	Course Objective:	Course Learning Objective:	
TO BE FILLED IN BY THE STUDENT			
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Assignment 1

Comparison of tweet data with stock prices of Nvidia and analyse either the tweets have influence over stock prices?

1. Step 1 - Nvidia tweets text sentiment analysis:

Sentiment	Score	Sentiment	Score	Sentiment	Score	Sentiment	Score
positive	0.69951	neutral	0.52009	negative	0.430048	neutral	0.542804
positive	0.657974	positive	0.668941	positive	0.6611	positive	0.786241
neutral	0.58518	positive	0.613157	neutral	0.475219	positive	0.647489
positive	0.69951	neutral	0.554667	positive	0.683747	neutral	0.53778
neutral	0.496713	negative	0.136677	negative	0.390728	negative	0.387101
neutral	0.58518	negative	0.366974	negative	0.394302	positive	0.719996
positive	0.838675	positive	0.770268	neutral	0.475676	positive	0.635023
positive	0.89531	negative	0.252394	negative	0.390728	positive	0.670661
negative	0.256719	positive	0.815638	negative	0.407167	positive	0.693853
neutral	0.521726	negative	0.439785	neutral	0.503259	neutral	0.523627

day9		day 8		day 7		day 6	

Sentiment	Score	Sentiment	Score	Sentiment	Score	Sentiment	Score	Sentiment	Score
negative	0.410356	positive	0.742338	neutral	0.467951	positive	0.720325	positive	0.922451
negative	0.233136	positive	0.673467	positive	0.862233	positive	0.670851	positive	0.676041
neutral	0.527716	positive	0.647489	neutral	0.551053	negative	0.271441	neutral	0.568445
neutral	0.500166	positive	0.802116	neutral	0.578162	positive	0.67276	neutral	0.573693
negative	0.274774	negative	0.3871	neutral	0.569496	positive	0.667265	neutral	0.58518
neutral	0.540051	positive	0.647489	neutral	0.54306	negative	0.201984	negative	0.147311
positive	0.711772	neutral	0.538071	positive	0.64331	negative	0.43372	neutral	0.568445
positive	0.754017	neutral	0.557931	neutral	0.577484	positive	0.825078	positive	0.60172
positive	0.762012	neutral	0.481198	negative	0.262015	neutral	0.568445	neutral	0.485173
neutral	0.527936	negative	0.389875	negative	0.291638	positive	0.637775	neutral	0.545737

day 5		day 4		day 3		day2		day 1	

Averages of per day tweets score:

date		mean/average	sentiments
06/02/2023		0.623649746	positive
05/02/2023		0.513859157	neutral
04/02/2023		0.481197423	negative
03/02/2023		0.614457479	positive
02/02/2023		0.524193496	neutral
01/02/2023		0.58670741	neutral
31/01/2023		0.534640265	neutral
30/01/2023		0.566964163	neutral
29/01/2023		0.567419641	neutral

Line graph of Tweets average per day data:
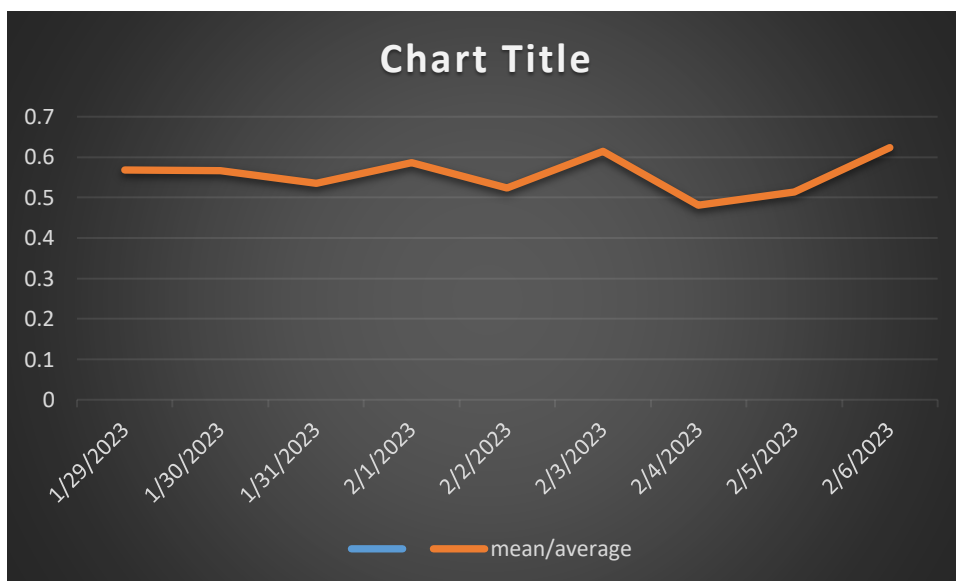
2. Step 2 - NVDA stock data:

Date	Open	High	Low	Close	Adj Close	Volume
25/01/2023	189.13	193.7	185.8	193.23	193.1613	44953700
26/01/2023	197.01	201.66	192.78	198.02	197.9496	48953500
27/01/2023	194.62	206.28	194.05	203.65	203.5776	54214200
30/01/2023	199.5	201.4	191.5	191.62	191.5519	48861100
31/01/2023	191.7	196.87	189.5	195.37	195.3005	49801700
01/02/2023	196.91	211.92	196.11	209.43	209.3555	66047700
02/02/2023	210	219.49	207	217.09	217.0128	56427600
03/02/2023	210	217.45	207.89	211	210.925	42936600
06/02/2023	208.06	215.7	207.86	210.89	210.815	45219700

Stock graph for NVDA:
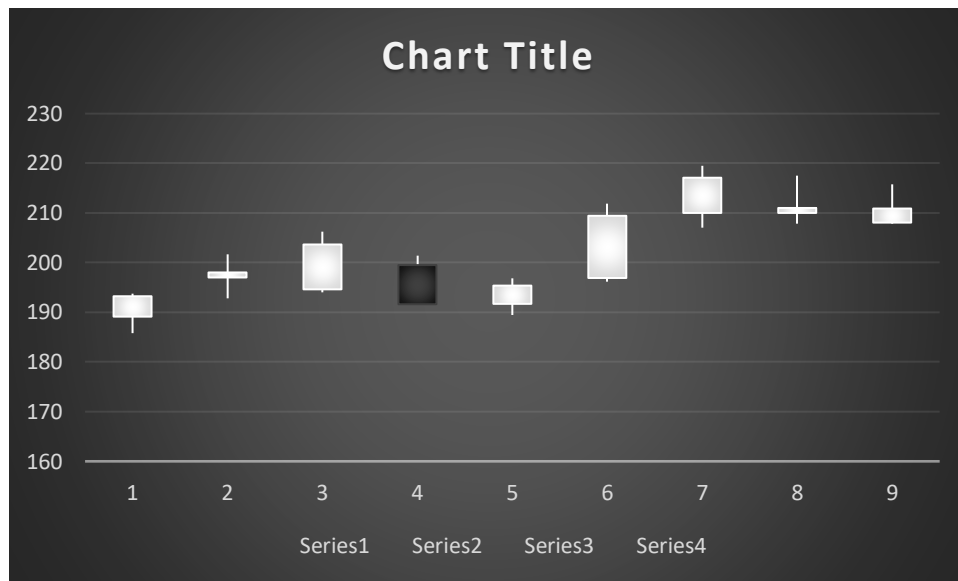
Comparison and analysis of tweet data with stock of NVDA:

Initially, data encompassing tweets from the last 9 days underwent sentiment analysis to gauge text sentiment. A subsequent line chart visualized these sentiments, highlighting that nearly 60% retained a neutral stance, 30% conveyed positivity, and 10% veered toward negativity.

Regarding the stock analysis, corresponding data for NVDA's stock during those same dates was collected, forming a stock graph. This graphical representation predominantly depicted closing prices lower than the opening prices, symbolized by white candles. Specifically, on 30-01-2023, the stock's closing price fell below its opening price, indicating a predominantly bullish trend with a singular bearish shift.

Analysis of both data and findings:

1. When people were unsure about Nvidia for a few days (neutrality in tweets), the stock usually started high but then dropped if there wasn't any positive reaction. So, if the tweets stayed neutral for a while (like three days), chances were the stock might go down. If the tweets stay neutral for a long time, it's hard to predict if the stock will go up.

2. When folks were feeling positive (like on 3-02-2023), the stock prices were low because maybe they were still waiting. But when the positivity came back on 6-02-2023, the stock started going up, even with a lower starting price. So, positive tweets after being negative or neutral often meant the stock might start going up.

3. On days when people were negative (like on 04-02-2023), it usually made the stock prices drop, especially on a day when the stock market was closed. When it reopened, the starting price was lower than the closing price before, showing that negative tweets can bring down NVDA's stock prices