



Presenting Comparison and Analysis of Sentiments between Twitter and Reddit

By TEAM 5:
Kamonashish Saha (110048042)
Niyati Vyas (110040836)
Course: COMP 8920 Social Network Data Analysis

Introduction

Sentiment Analysis

Study of sentiment analysis is increasing with increase in microblogging websites!

Data is power

More power for companies selling products, marketing or reviewing products, staking the audience, etc

Comparision between social media platforms

Reddit users vs. Twitter users



Literature Review

Useful points from past research



- Reddit and Twitter are two of the most popular platforms
- Comparisons performed between them
- Results of the comparison

Data obtained

Let's talk numbers!

11
Topics

Topics	Reddit	Twitter
Stockmarket	5656	5656
Football	5388	5557
Politics	5400	5555
Vaccine	5626	4572
Cricket	1427	5315
K-pop	5505	5315
Meghan Markle	5334	5656
CryptoCurrency	5507	5428
SpaceX	5257	5314
Electronic Cars	5911	5428
Joe Biden	5600	5314
TOTAL	56611	59110

100K
Tweets and posts

Data obtained

And graphs...

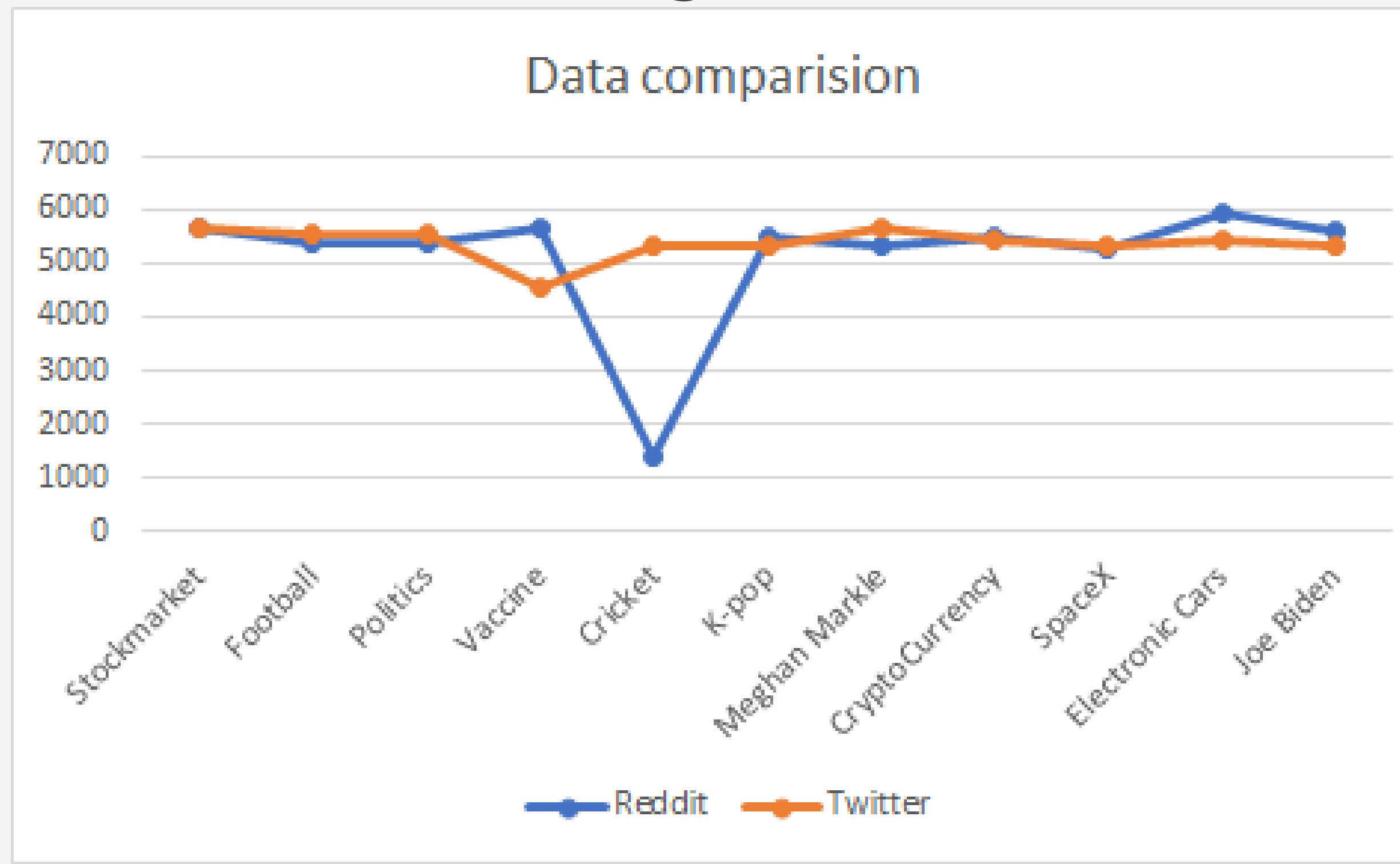


Fig: 1 Data Comparison

Proposed Method

The road we took

Data

Gather Data from Twittwr and Reddit APIs
Pre-process and cleaning

Sentiment Analysis

Divide clean data into Positive, Negative and Neutral Sentiments

Compare

Compare sentiments between both the platforms as well as internal comparision between topics

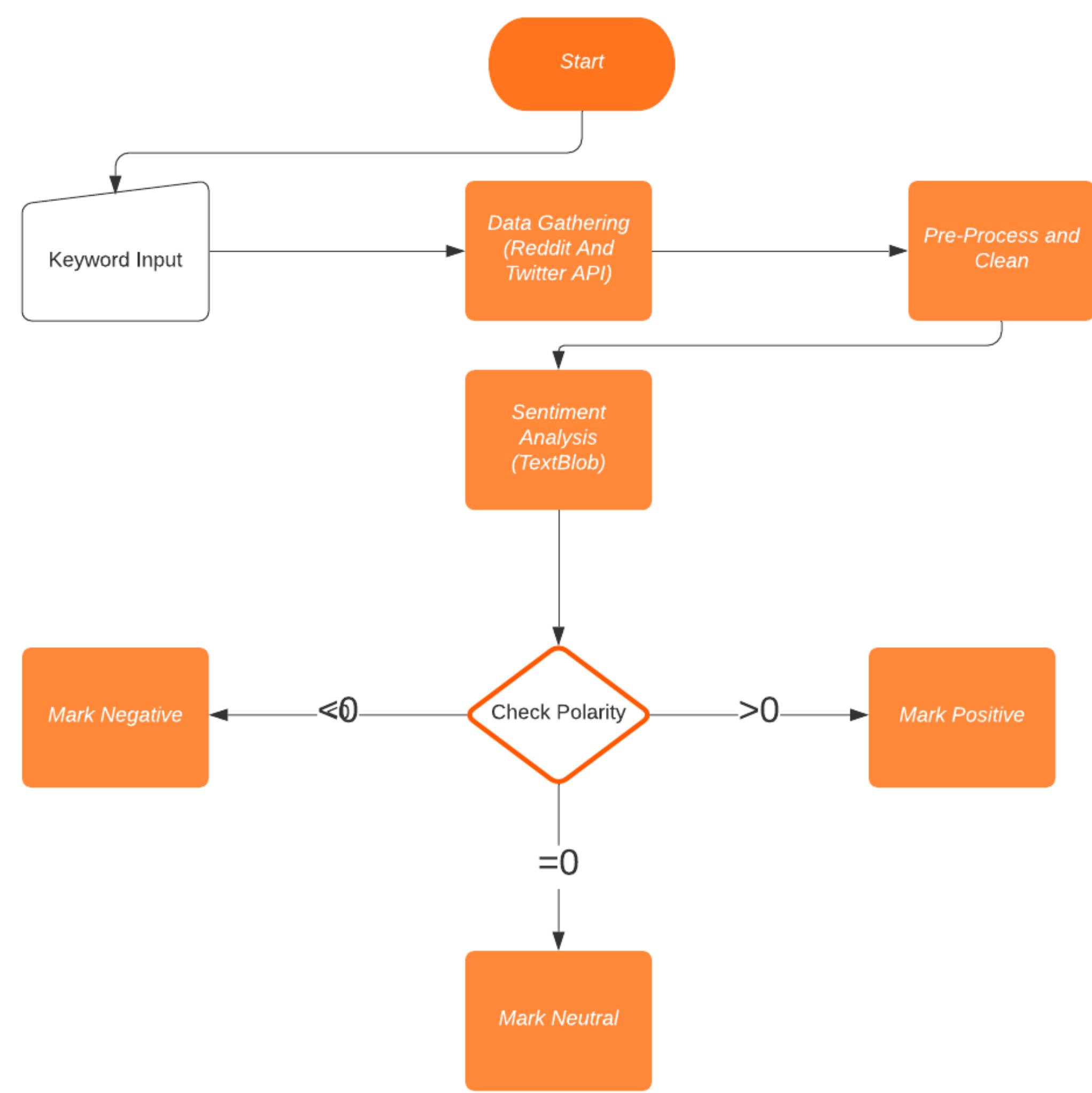
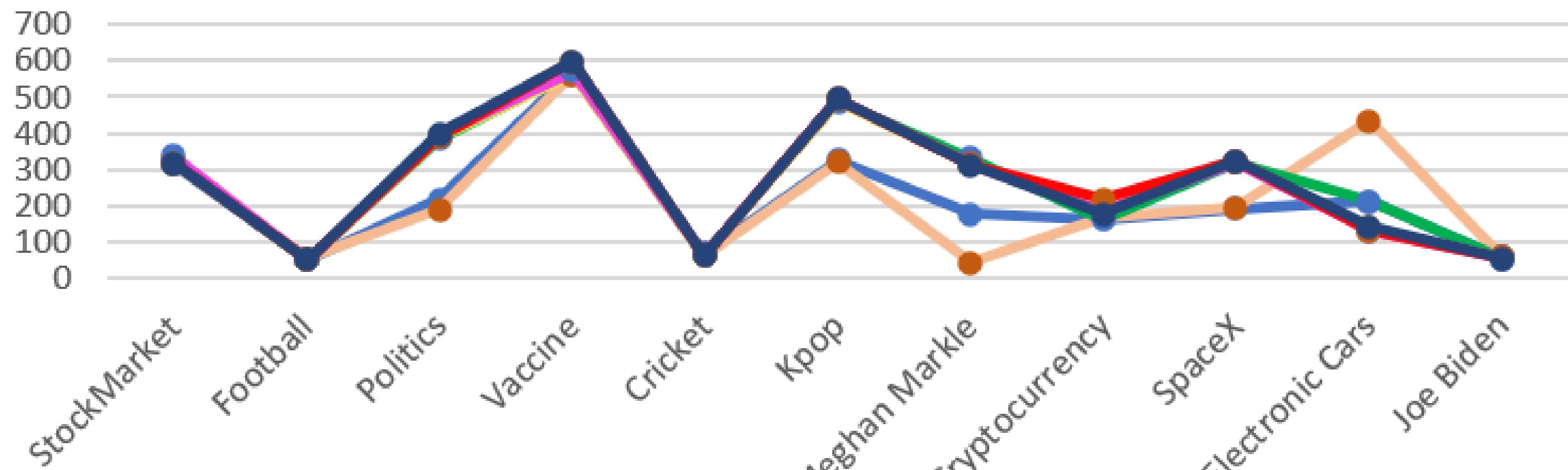


Fig: 2 Overall Work Flow Diagram

Results and Analysis

Reddit: Positive



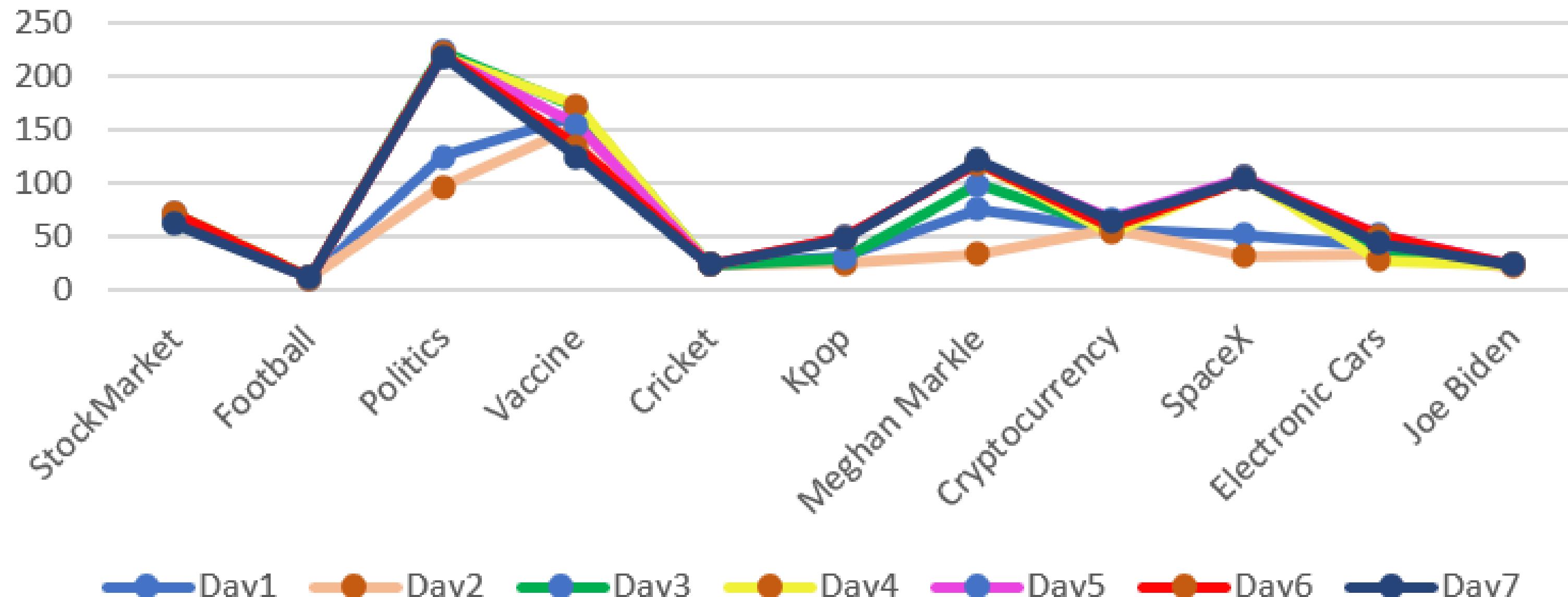
—●— Day1 —●— Day2 —●— Day3 —●— Day4 —●— Day5 —●— Day6 —●— Day7

Topic	Day1	Day2	Day3	Day4	Day5	Day6	Day7
StockMarket	2257	376	2368	4029	453	3112	1812
Football	376	200	150	250	300	350	400
Politics	2368	180	220	250	300	350	400
Vaccine	4029	550	580	600	550	520	500
Cricket	453	100	150	200	250	300	350
Kpop	3112	350	300	380	450	480	520
Meghan Markle	1812	50	200	300	350	380	250
Cryptocurrency	1268	200	250	300	350	400	450
SpaceX	2005	180	200	250	300	350	400
Electronic Cars	1407	100	150	200	250	300	350
Joe Biden	401	100	150	200	250	300	350

Fig: 3 (a) Result and Analysis of Reddit

Results and Analysis

Reddit: Negative

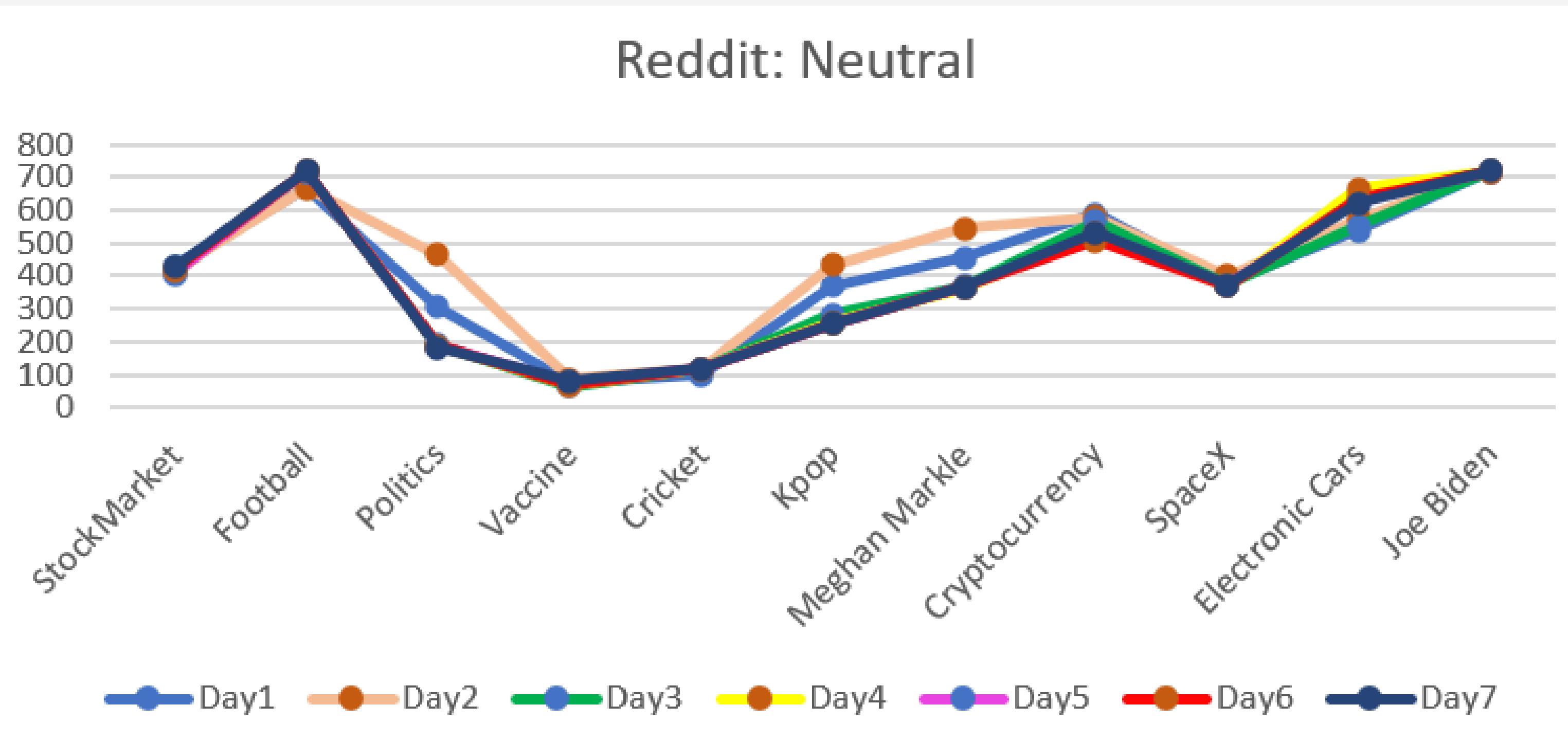


Topic	Count
StockMarket	470
Football	82
Politics	1326
Vaccine	1077
Cricket	168
Kpop	283
Meghan Markle	689
Cryptocurrency	420
SpaceX	610
Electronic Cars	289
Joe Biden	166

Fig: 3 (b) Result and Analysis of Reddit

Results and Analysis

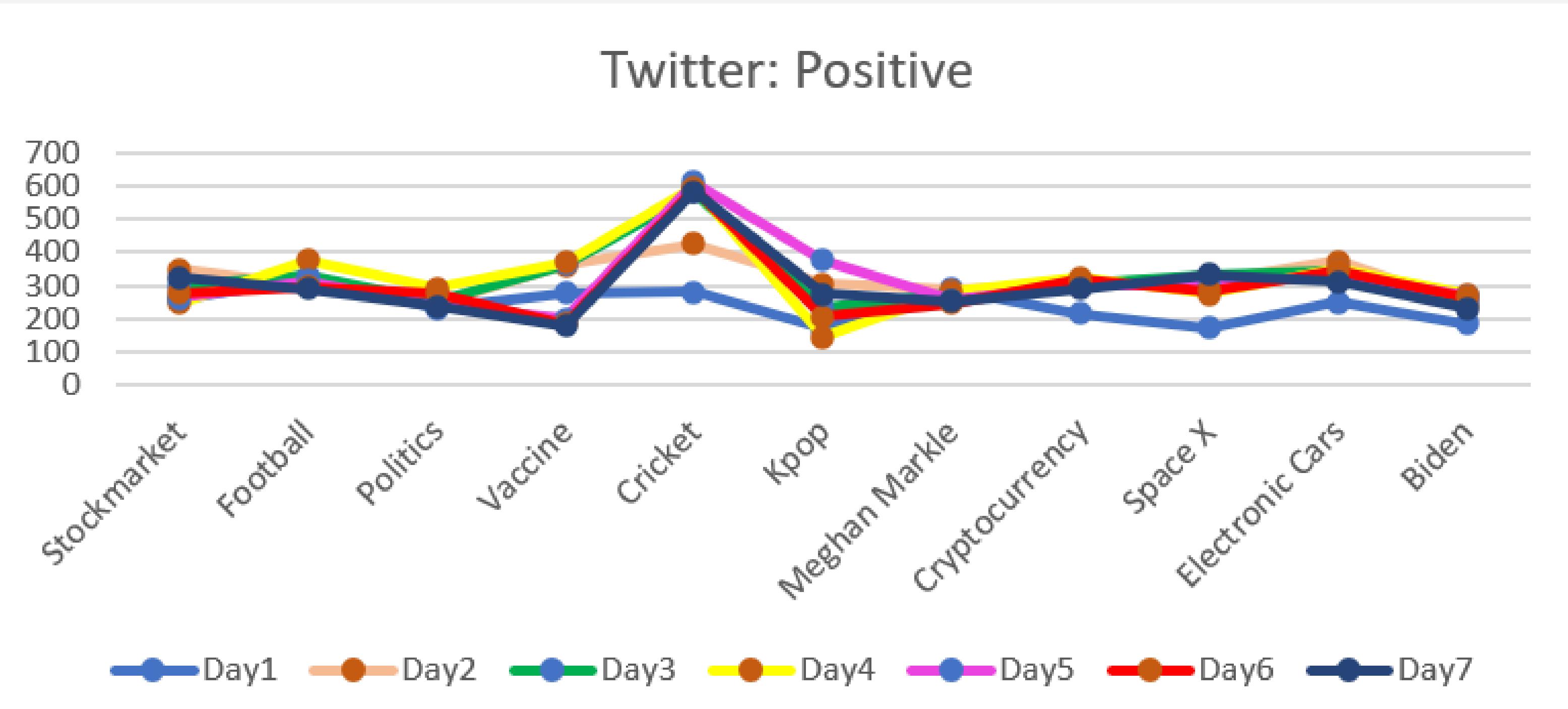
Reddit: Neutral



StockMarket	Football	Politics	Vaccine	Cricket	Kpop	Meghan Markle	Cryptocurrency	SpaceX	Electronic Cars	Joe Biden
2929	4930	1706	520	806	2110	2833	3819	2642	4215	5033

Fig: 3 (c) Result and Analysis of Reddit

Results and Analysis

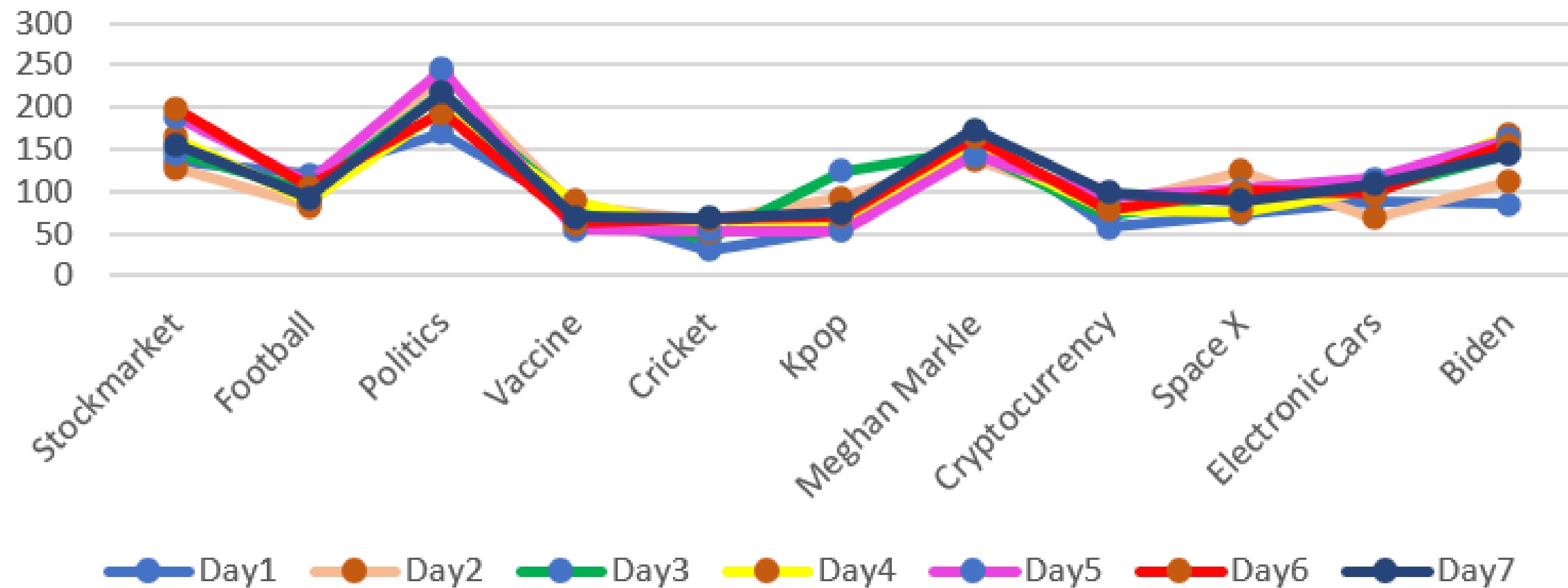


StockMarket	Football	Politics	Vaccine	Cricket	Kpop	Meghan Markle	Cryptocurrency	SpaceX	Electronic Cars	Joe Biden
2014	2222	1772	1935	3661	1712	1891	2054	2005	2302	1721

Fig: 4 (a) Result and Analysis of Twitter

Results and Analysis

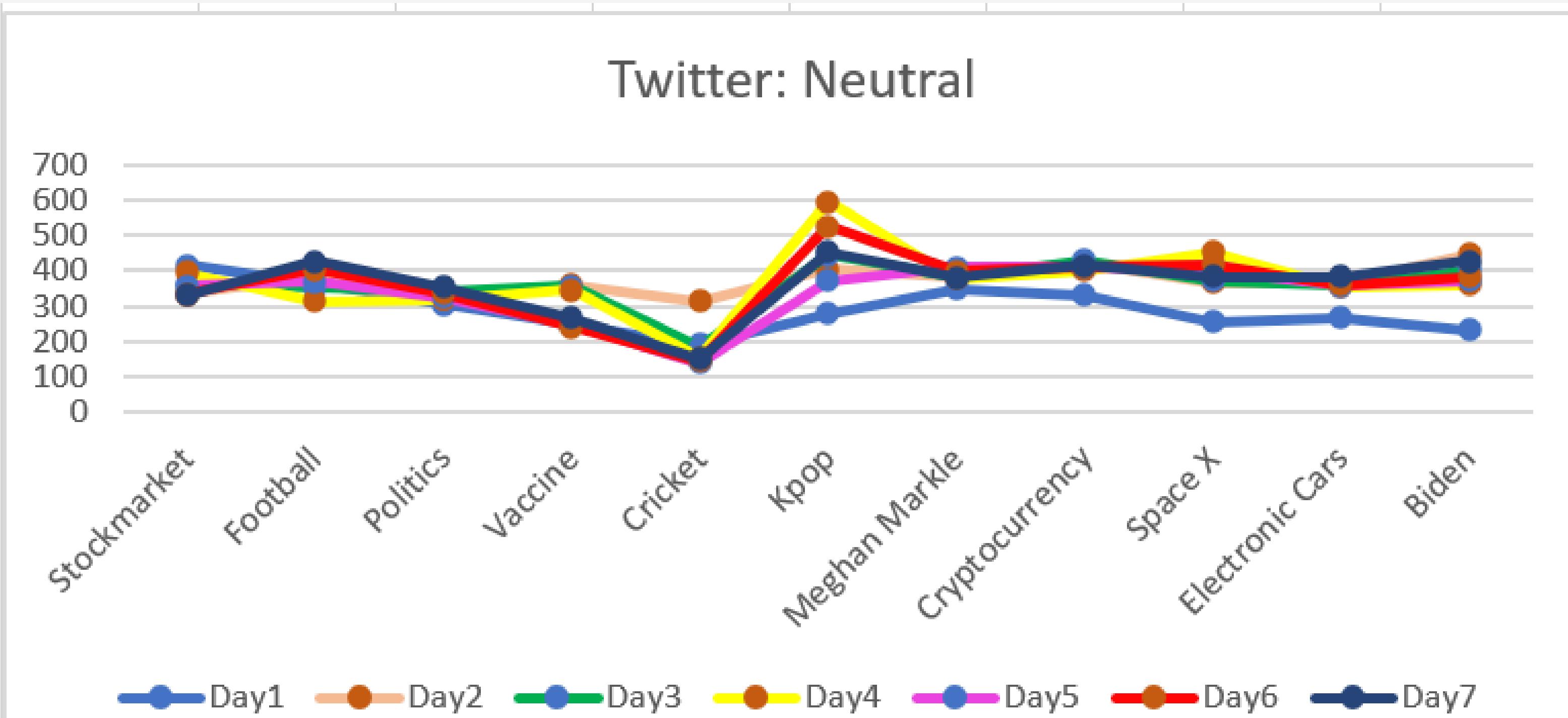
Twitter: Negative



Topic	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
StockMarket	1116	698	1480	517	377	532	1087
Football	558	661	680	969			
Politics							
Vaccine							
Cricket							
Kpop							
Meghan Markle							
Cryptocurrency							
SpaceX							
Electronic Cars							
Joe Biden							

Fig: 4 (b) Result and Analysis of Twitter

Results and Analysis



Topic	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
StockMarket	2526	2612	2303	2069	1277	3071	2678
Football	2526	2612	2303	2069	1277	3071	2678
Politics	2526	2612	2303	2069	1277	3071	2678
Vaccine	2526	2612	2303	2069	1277	3071	2678
Cricket	2526	2612	2303	2069	1277	3071	2678
Kpop	2526	2612	2303	2069	1277	3071	2678
Meghan Markle	2526	2612	2303	2069	1277	3071	2678
Cryptocurrency	2526	2612	2303	2069	1277	3071	2678
SpaceX	2526	2612	2303	2069	1277	3071	2678
Electronic Cars	2526	2612	2303	2069	1277	3071	2678
Joe Biden	2526	2612	2303	2069	1277	3071	2678

Fig: 4 (c) Result and Analysis of Twitter

Results and Analysis

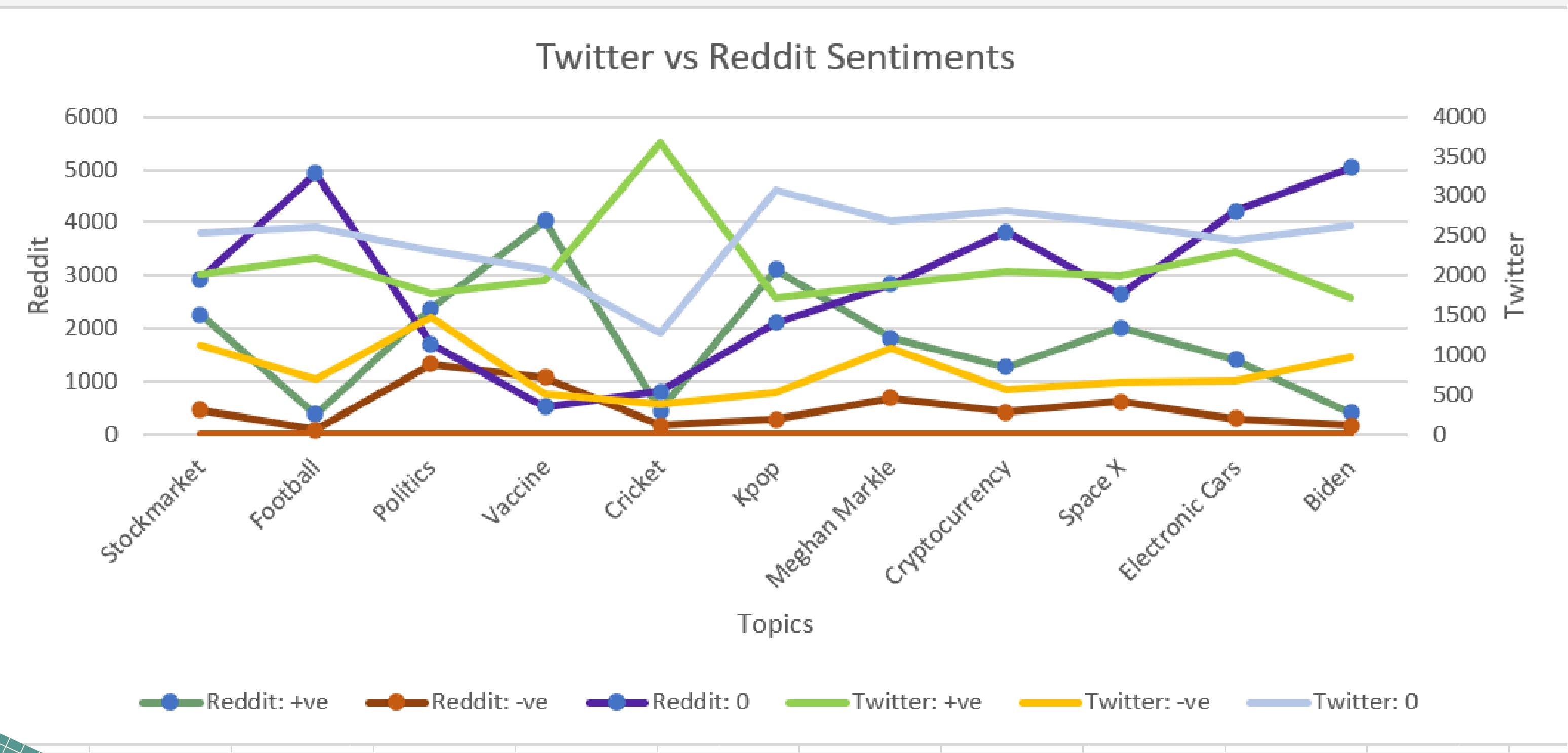


Fig: 5 Twitter vs Reddit Sentiments

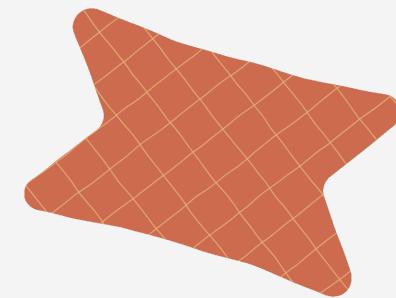
Conclusion



**Future
prospects**

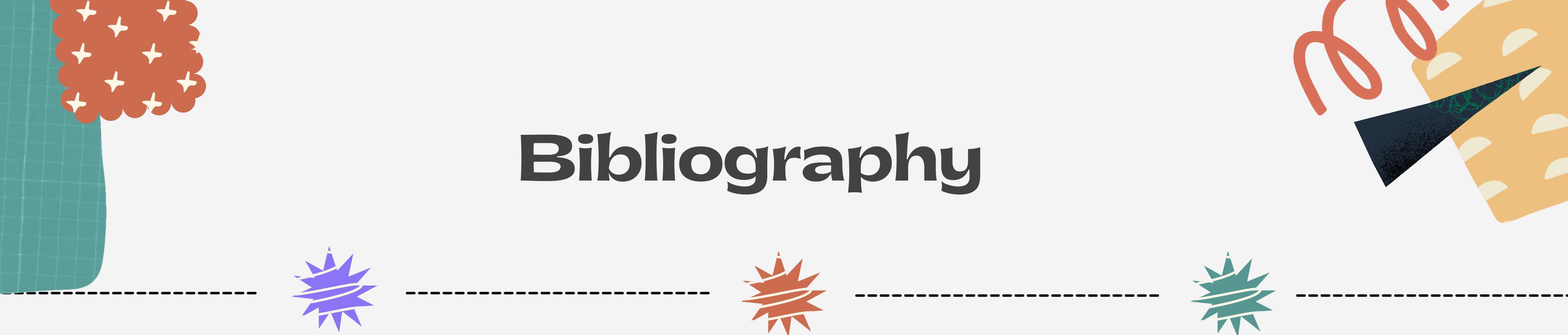


Extension



Application

- Twitter and Reddit are both good platforms for data extraction
- Project can be extended to include more topics, more platforms
- Can be used for gaining insights about a company's products, user reactions to the product, etc



Bibliography

- 
- **Tankovska, H. (2021, February 11). Number of monetizable daily active Twitter users (mDAU) worldwide from 1st quarter 2017 to 4th quarter 2020. Statista.**
<https://www.statista.com/statistics/970920/monetizable-daily-active-twitter-users-worldwide/>
 - **Dive Into Anything. (n.d.). Redditinc.** <https://www.redditinc.com/>
 - **Medvedev, A. N., Lambiotte, R., Delvenne, J. C. (2017, June). The anatomy of Reddit:An overview of academic research. In Dynamics on and of Complex Networks (pp. 183-204). Springer, Cham**

Bibliography Continuation..



- Hazarika, D., Konwar, G., Deb, S., Bora, D. J. (2020). Sentiment Analysis on Twitter by Using TextBlob for Natural Language Processing.
- Zubiaga, A., Spina, D., Martínez, R., Fresno, V. (2015). Real-time classification of twittertrends. *Journal of the Association for Information Science and Technology*, 66(3), 462-473.
- Priya, S., Sequeira, R., Chandra, J., Dandapat, S. K. (2019). Where should one get newsupdates: Twitter or Reddit. *Online Social Networks and Media*, 9, 17-29

Thank you! Questions?

