

Social Media competitive analysis of Laptop industry with text mining

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Abstract- Many businesses have adopted social media. In order to provide services many companies are now using social media websites such as Twitter and Facebook. As a result of this a huge amount of content generated by user is available online freely. Companies require analyzing and monitoring the content generated by both the customers on their social media sites and information available of their competitor's social media websites. This paper provides an indepth study of company's social media competitive analysis using text mining on structured and unstructured data of five Major laptop brands: Dell, Hp, Acer, Asus, Toshiba. Our results revealed that text mining is an effective technique for social media competitive analysis.

Keywords— Social media competitive analysis, Laptop brands, textmining, .

I. Introduction

Web-based social networking have significantly changed our lives and how we have connection with one some other and the worldwide around the current research suggests that increasingly humans are using social media platforms which includes Facebook for numerous motives inclusive of making new buddies, entertaining with friends, getting feedbacks/comments, and as a outcome, massive groups are applying social media platforms to house this increasing fashion with a purpose to take advantage of enterprise values such as retention, increasing sales and sales, enhancing purchaser satisfaction, growing logo focus and constructing recognition of usual activities supported with the aid of social media techniques include branding and advertising. An instance is that many well-known laptop brands. We are utilizing the strength of social media as of late.

Our lives have been profoundly changed by social media in way that the way we each other and the world around us [6]. Latest studies showed that more people are using now Twitter and Facebook applications for some multiple reasons such as for the simple reason of making new friends, with old friend socialization and for their entertainment. [7] Many major organizations are now using social media for their accommodation of new trends to gain business values such as driving customer traffic, increasing customer loyalty and retention, increasing sales and revenues, improving customer satisfaction, creating brand awareness and building . An example is that various hotel chains are now taking advantage.

II.Literature Review

From textual data extraction of information that is meaningful text mining is the new technology. [1] stated that text mining is an extension of data mining. Study show that about 80% of organizations text document is contained, such as memos, email, and reports (Tan, 1999). From a wide range of textual documents to extract useful information computer techniques are more appropriate. Text mining is used for the analysis of latest trends, models and patterns from the textual unstructured data from chat messages, HTML files and emails [2]. To identify important knowledge from textual unstructured information text mining is useful (Ananiadou, 2008). It differs from techniques that are traditional for the analysis of content, text mining is driven mainly by data and its basic purpose is to trends and patterns that are hidden automatically [3] and from these results interpretation and

models can be created which explain latest patterns and trends [4]. Many researchers successfully have used text mining techniques for the analysis of large amount of businesses textual data [5] using text mining techniques analyzed online posted questions by students streaming videos and identified a patterns for learning and issues related to technology. Content mining is centered around finding helpful models, advancements, examples, or arrangements from such literary data which are unstructured and comprising of printed content files. In particular, bunch assessment is a key utilization of substance/content mining and incorporates four crucial building squares: trademark decision, the grouping set of guidelines, approval of the results, and translation of the impacts. Their belongings demonstrate that modernized literary substance mining procedures have the ability to asset the ones who should endeavor to go over lies in content.

III. Research Questions

Information which is created by the users in social media is very crucial. This work examined five major laptop brands social media sites and applied text mining technique for the analysis of unstructured textual data on their Facebook respective pages. Specifically this paper made an attempt to answer following research questions.

- What patterns can we find on their respective fb pages?
- What are the trends?

IV. Procedures

To find answers to the above mentioned research questions. In order to answer research questions, we performed competitive analysis of social media for the Facebook sites. First we collected data from facebook from 2018 to 2019 using Netvizz from five brand respective facebook, data collected is such as posting frequency, likes and shares, comments etc. Secondly using QDAminer and Wordstat we applied text mining techniques for the analysis of text comments posted on their Facebook pages to discover new patterns of knowledge and to gain deeper how these laptop brands change their practices of social media. The process of text mining involves few steps. First, we did data preprocessing in which we transformed data onto a format that is usable, mainly by integrated data. The data obtained from Netvizz is saved in excel format than we extracted comments from that data. We applied text

mining on these comments in order to gain insight about their activities on social media. The query searches are used to test ideas such as to find connections, interesting patterns and unusual information which are based on research questions.

v. Findings

We gathered the data which is quantitative from these brands respective pages on Facebook, information such number of posts, likes and comments of each brand separately as number of likes, number of comments and posts. Our main interest is in number of followers each laptop brand has on their respective Facebook pages and their engagement level in **Table 1**. The table states that the most popular brand is Asus on the basis of its followers whereas Toshiba stands last.

5.1 Table1

Number	Brand Name	Facebook followers
1	Asus	26M
2	Acer	11M
3	Hp	4.3M
4	Dell	12M
5	Toshiba	1.5M

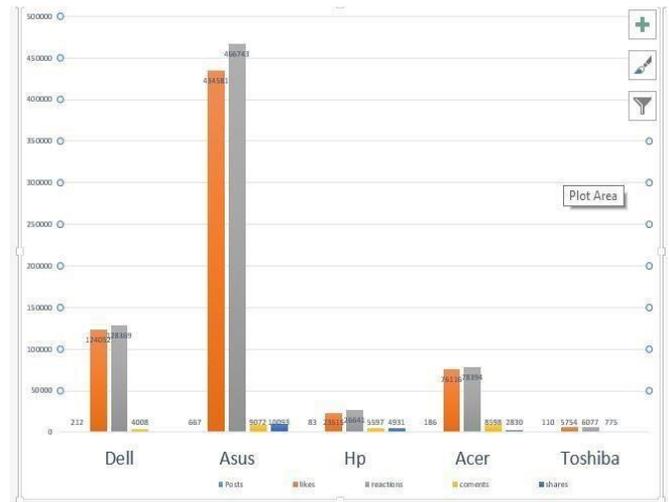


Fig. Trends of posts and likes of five brands

Below is the trend in number of posts, likes and comments from 2018 to 2019. For the major laptop brands named: Dell, Hp, Asus, Acer, Toshiba. Figures below show the

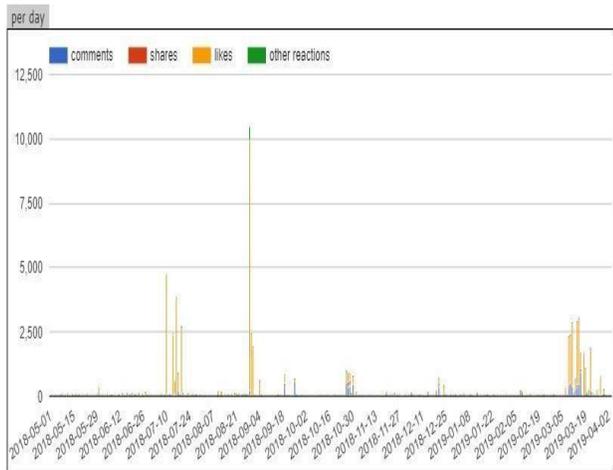


Figure 2.1. Dell

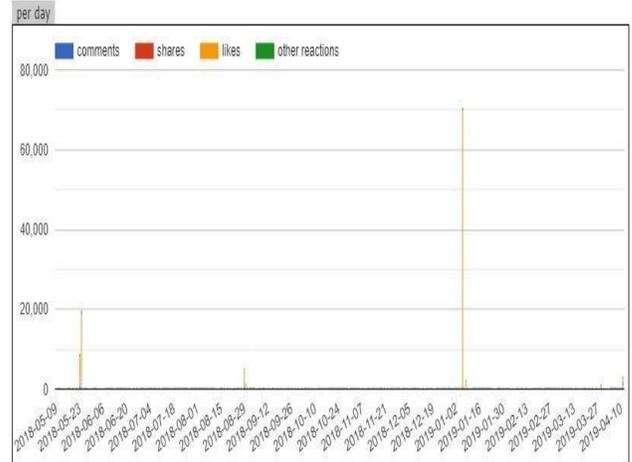


Figure 2.3. Acer

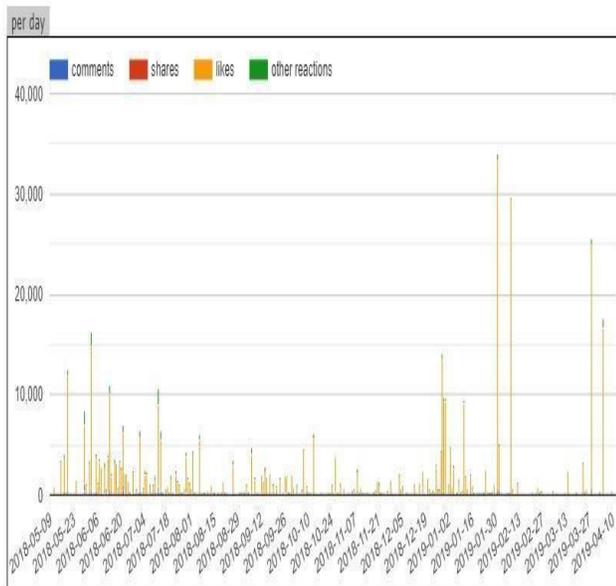


Figure 2.2. Asus

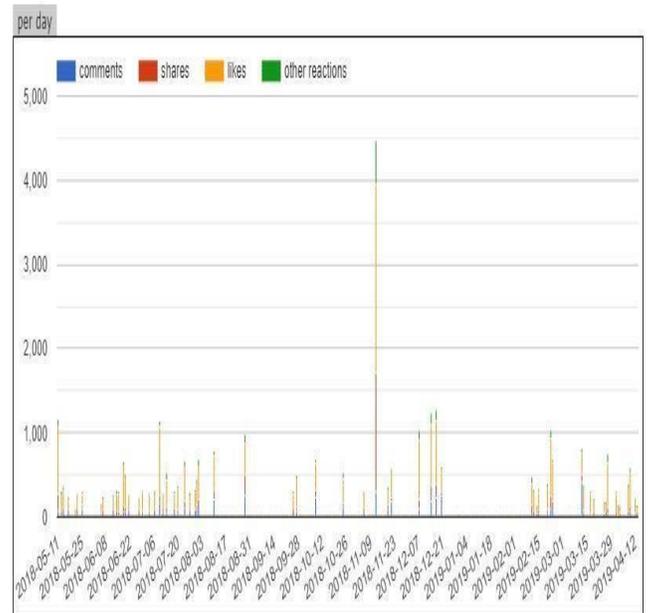


Figure 2.4. Hp

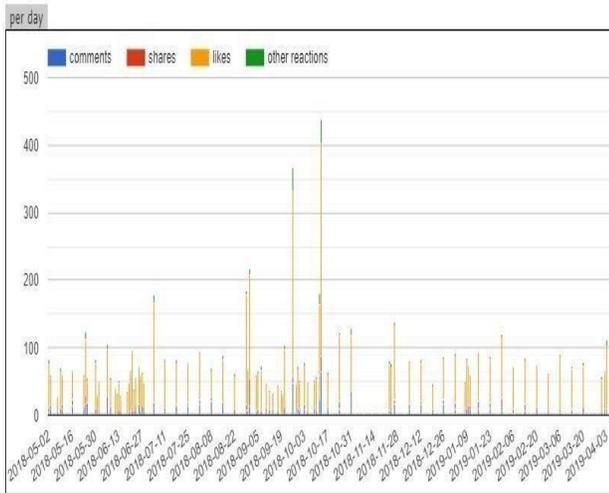


Figure 2(e): Toshiba

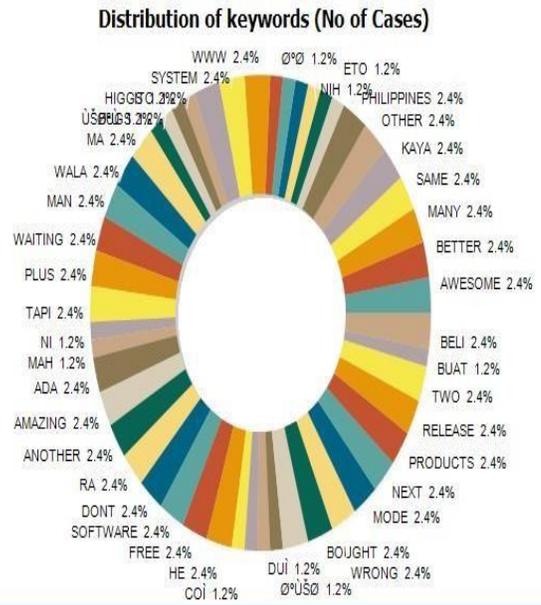
occurring in the comments which is the unstructured textual data generated by the users. The frequency of words basically shows the trends.

VI. Discussion

Positive comments are the key to success for many companies to increase their revenue and sales. The effects monitor that the 5 biggest Laptop brands are very active in social media and their dedicated employees are playing a great role in building the product. The statistics we studied demonstrate that the employees are dedicated to presenting pleasant experience for his or her consumers. For instance, if questions didn't answer quickly, their customers do a quick apologized.

The text mining results of comments of all the five brands show the following results. "Fig 3" shows no of frequent words used

However, we additionally discovered that the dedication range across Laptop brands and social media packages confirmed a better degree of dedication between the clients than the alternative two laptop brands on the figure of posts and positive comments on their social media [1]. The efforts Hp does on social media are very helpful that their marketplace percentage around 20% which is smaller than the marketplace shares of Dell which is 16.2%. In particular, we noticed that HP's communication is very fast with their customers,



3. Text mining result of big five brands

which represents their solid endeavors in dealing with their online networking exercises. Facebook have a lot of promotional activities then other platforms. The interactions among clients and laptops industry can catch the eye of other social media customers. This case examination of the five laptop brand chains similarly validates the impact of social media on customer support. Therefore, it turns into an essential for all the laptop brands to actively checking the social media web pages to track customer conversations to avoid any problem.

VII. Conclusion

Web-based social networking competitive analysis picks up a great deal of enthusiasm for heaps of organizations. It's exceptionally basic to see how online networking data can be extremely gainful for some organizations.

As of now, significant organizations have more spotlight via web-based networking media explore. There are few examinations seeming online networking focused assessment foundationally. As an exploratory investigation, this illustration takes a gander at made a commitment with the utilization of literary substance mining to accomplish competitive analysis for the client

created measurements on Facebook in 5 laptop brands [1]. Impacts from the printed content mining and webbased social networking focused examination demonstrates that those laptop makers effectively connected with their clients in online networking the utilization of Facebook. They utilized the online networking not handiest to advance their contributions. Our examination from this exploration suggests that online networking plays out an essential position in keeping up a convincing seeking after with customers. In this way, a future research is to gather ongoing data and LAPTOP information digging and content digging for assessment and review the insights to fulfill higher aggressive knowledge. Such endeavors can bring about additional adjusted, recognized and give specific contributions to customers.

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