SOCIAL MEDIA ANALYTICS FOR BUSINESS ANALYSIS AND IMPROVED DECISION MAKING

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ABSTRACT : This paper proposes a system of data analytics that can be used to improve the understanding of marketing campaigns and impact of these campaigns on the decision makers in the organization. The earlier research on this topic has yielded astonishing results. However, the study was limited only to a single organization in the banking domain. Here we study the impact of social media analytics in varied fields such as real estate, charity organizations, stationery industry and beauty salons. This diversity in the nature of these organizations gives a clear understanding of the impact of social media and how this can be used to make better decisions.

Keywords - About Social Media; Digital Marketing; Analytics;

I. INTRODUCTION

Social Media has undergone a metamorphosis in the last decade. What started off as a portal of connecting groups of people on the online platform has now become a major marketing and advertising platform. People are making their buying decisions based on the brand‘s social media presence.

More and more companies are being driven into maintaining a noble image on the social media platforms by being prompt in replying to customer concerns and resolving issues in a quick and efficient manner. In addition to this, social media analytic data is used to streamline the marketing process and derive more results from optimized campaigns.

Currently, Facebook and Twitter are the most popular social media platforms that are used in digital marketing. New platforms such as Instagram, Vine, Snapchat and Pinterest are showing promising signs of being the next big things.

Digital Marketing started with the basic infrastructure of e-mails and web ads. With the evolution of browsers, digital marketing strategies improved a lot. Making use of cookies and device locations, it is possible to target ads that are specific to the user. Using the Moore‘s Law, systems can predict the buying pattern of the user.

E-commerce companies use cookies to push ads related to the product that the consumer may be interested to buy. This influences the consumer to buy the product that he finds visible most often, resulting in more sales for the companies.

With this current scenario, there is an increasing need to have a single platform to assess and utilize the information that is gathered. In this paper, we propose a web tool which uses streaming APIs to gather real-time data and then we apply clustering algorithms to make sense of patterns that are observed. This will enable the decision-makers to come to strong conclusions in a lesser time-frame. This system details the framework of the tool which encompasses many social media platforms to pull up data from every platform. Also providing a single sign-on feature, which enables seam-less connectivity between the user accounts, is proposed.

The functionality of report generation is also included to increase the ease of use. Reports are generated in portable data format. It will also include graphical representation of the data to make the presentation impressive.

II. RELATED WORK

There have been many studies in the past relating to this domain. Rozenn Dahyot, Conor Brady, Cyril Bourges and Abdullah Bulbul have proposed a system of visualizing social media analytics in their paper. Graeme Shanks and Nargiza Beckmamedova proposed a theoretical framework for Social Media analytics and business value.

These studies had a few shortcomings. The most important drawback of the first study was that it failed to encompass the multitude of platforms that are popular. Second study considers only one organization for the research. They use the framework as a lens for a case study involving a major financial corporation that used SMA as a

critical component of a major and highly successful marketing campaign.

This limits their range of use and restricts its domain. In this section, we discuss relevant literature and identify a knowledge gap in Social Media Analytics[SMA]. Social media enables users to generate content by sharing their knowledge, reviews and experiences on a plethora of issues. Social media has changed the way customers engage with brands and their services. It influences customer attitudes, perceptions and buying decisions [3]. It provides a powerful marketing platform that can be used to increase customer awareness of associated brands, products and services [1]. Also, it enables companies to improve their customer relationships through better engagement on a real time basis.

SMA involves the gathering, analysing and reporting of social media data to support efficient decision-making. SMA is being widely used in ecommerce, e-government and politics, to achieve influence and enhance customer retention, brand recognition and marketing, scale and speed, lower costs and increase flexibility.

SMA harnesses the data from social media to create a dynamic understanding of how users, organizations and brands are perceived in those social networks. SMA provides brands with a convenient platform to connect with customers and shape their perceptions through timely and targeted campaigns, responsive customer service or creating groups of mutual interest.

The Resource-Based View (RBV) has been widely used by Management Information Systems (MIS) researchers in order to understand how investments in MIS lead to organizational value-addition and competitive superiority [12]. An organization may be defined as a collection of resources that empower it to succeed and compete in the market. Resources comprise both assets and capabilities. Assets can be hardware, software, skilled personnel and data. Capabilities include competencies and practices. In order to be of strategic importance and achieve competitive superiority, resources must be valuable, rare, inimitable and non-replaceable.

Organizational resources are a critical factor of company performance. There has always been a debate over whether investment in MIS contributes to business value and whether the impact is direct. RBV theory has been used to demonstrate the effect of different types of MIS investment at different levels within organizations, including business processes, business modules and organization-wide effects [12]. Dynamic capabilities extend the RBV by ‗shaping' and reconfiguring an organization's currently available resources to adapt to constantly changing technology and business environments [9]. Organizations invest in resources and learn how to use these resources over time by developing skills and accompanying practices.

The social media landscape may be explained as the intersection of the events of social media stakeholders, including specialist SMA companies and customers, and the scheme of analysis at which those events are studied [10]. We focus on social media events at the level of *management and organization*. This includes how firms manage and allocate their internal resources when using SMA to meet business targets in order to create value.

The SMA framework is based on RBV [8], dynamic capabilities [9], IT resources, organizational benefits [12], and awareness motivation [7] (see Figure 1).

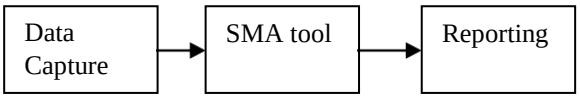


Figure 1. Social media analytics framework

The SMA framework consists of three main concepts: Data capturing, SMA tool and reporting. Data capture is the most important stage. Here the extensive data from all social media platforms are gathered to be made available for analysis. The SMA tool will cluster the data based on many parameters which are user defined. Once the data is processed, valuation results are obtained. And these results are passed to the front end to create descriptive reports.

Social media provides organizations with the ability to monitor and analyse customer views and interactions on social media platforms. In their analysis of the value of social media to organizations, Larson and Watson [7] identify three motivating consequences: information, persuasion and collaboration. While persuasion and collaboration are important for understanding the strategic use of social media, they are less relevant to the use of SMA. We focus on the analysis of social media data to generate information about customer views and interactions. The awareness is usually associated with the marketing and sales functions within organization.

III. TECHNOLOGY

Force.com is a platform as a service (PaaS) that allows developers to create add-on applications that integrate into the main Salesforce.com application. Force.com applications are hosted on Salesforce.com's infrastructure.

It is a completely cloud-based infrastructure where all the stages of SDLC are done on the cloud through a browser. Writing of code, test classes, scale testing, sandbox testing and deployment are all done on the browser.

This feature allows us to develop applications without having to install any SDK or Platforms. Another noteworthy feature is the integrating capability of the platform with APIs of different languages. In the implementation and development of the analytical tool, APIs and streaming APIs from many social media platforms were used. The huge influx of data from varied sources had to be collected and synthesized to make it useful.

IV. CASE STUDY

In this work of research, we consider the case of real-estate major Hebron Properties, Non-government organization called –Association of People with Disabilities‖ [APD] and Naturals beauty salons. These are picked from the list of clientele at Scion Social.

The first case of importance is that of Hebron Properties. Hebron is a popular real-estate giant and construction company catering to the elite set of customers all over southern India. Hebron decided to harness the power of SMA early in day. With a small investment they were able to create a substantial social media presence on Facebook and LinkedIn.

Due to its niche audience, targeted advertising was the most obvious choice of marketing. So Scion Social designed an important strategy. And this was to find potential customers based on the designation they hold and place of residence. A comprehensive list of CEOs, Directors, VPs and CFOs was compiled for the city of Bengaluru.

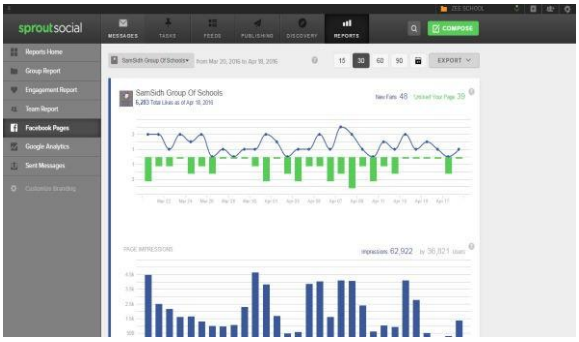
And the advertising materials were pushed only to these people over a period of time. The campaign proved to be a major success resulting in lead conversion in many occasions. The return on investment was extremely good. Scion Social‘s strategy of using data from LinkedIn and Facebook as a lead filtering mechanism is noteworthy.

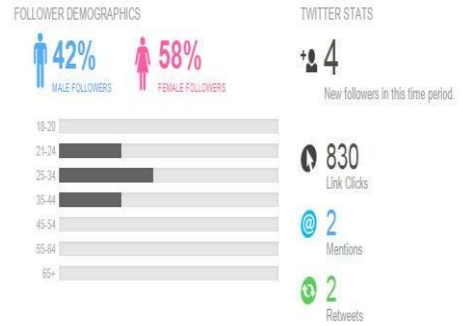
Second case relates to that of APD. APD had a primary goal of getting donations for the organization. And a secondary goal of publicising of their activities to build credibility among funding agencies. This case is important considering the nature of domain APD is involved in.

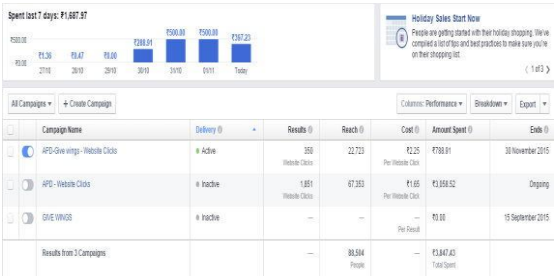
Social media strategies were formulated in such a way that, all the activities of APD were given a run-up publicity and pictures from their campus were regularly posted to keep the audience familiar with the organisation and its working.

When a research was carried out using SMA, it was found that most of the funding to APD was coming in from USA. So a campaign was designed to attract more donations from USA. This involved ads catering to the audience comprising of average US citizens. In addition, ads were targeted at bigger NGOs working on similar lines and religious groups which were generous in contributing to social causes.

Thirdly, the Naturals chain of beauty salons entered the social media space. Using the SMA, it was concluded that the customer base of each outlet was very similar in terms of age. So the company was able to make changes in their operations to suit their young patrons. This was carried out through selfie campaigns and festive offers. In addition, the brand‘s connection with the customers improved a lot, resulting in customer retention. The value addition which SMA did to Naturals was immense.







V. CONCLUSION

With these observations, we can conclude that SMA plays a vital role in present day business strategies. Organizations making use of SMA are reaping rich benefits already. This study had a diverse set of cases, which gives insights of useful nature. The limitation of the study is that it does not consider new social media platforms such as Instagram, Snapchat and the likes. Multimedia data is also not considered for analysis.

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