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SOCIAL MOBILE ANALYTICS CLOUD- AN INTRODUCTION

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Abstract-

SMAC (Social, Mobile, Analytics and Cloud) is an incorporation of four technologies that have become the drivers of innovation in businesses at present. Facebook, Blogs, Twitter, E-Mail, Wikis, Instant Messengers and other social network services and software applications which promote and assist interpersonal communications, both business and personal. Tablets, smartphones, personal digital assistant (PDAs), and global positioning system (GPS) to the network, are applications and software which prop up anywhere connectivity. These present new stages of empiricism and close by founding a software supply chain of gathering, classifying, overseeing, determining, examination and reporting large volume of dissimilar date on fragmentary basis. This set asides remotely based computing resources which include application, database and server to distributed via internal instead of internal and permitting for flexibility of resources with minimum cost. This paper presents an overview of four technologies which combines and introduce to SMAC.

Keyword: Social media, cloud, Analytics,

INTRODUCTION

Social networking is related to the data generated from social media platforms such as Twitter, Facebook and LinkedIn. The data shows the customer timeline about the trending topics, what are the interests of the customers and their family demographics. Mobile devices have become the largest community of business building as they let their users to update their profiles, be aware of the latest promotions and deals and track location forming buying habits just by connecting to wireless signals. Analytics have become the cornerstone of innovation as they can make intelligent predictions about customer behaviors in a relatively short period of time by looking at the hundred million records of customer data available in their databases. The cloud computing enables business to easily access data by renting it off a cloud provider instead of investing millions in the construction of a data warehouse. (Hassell, 2015).With the increase of structured as well as unstructured data being produced from mobile devices, social media and website browsing, businesses now a days can now create new customer centered business models from the customer data generated through these sources. (Rouse, 2014) The social media provides businesses to reach out and interact with customers in many innovative ways. Mobile technologies have evolved the method of communication, shopping and work. (Rouse, 2014) The Analytics are used to find out when, how and

where particular goods and services were used and lastly, cloud computing gives access to the technology and the information or data needed for a business to keep tabs of shifting market trends and resolve business conflicts.

(Dr. Anamika Bhargava, 2015) Two increasing trends are being observed in the area of data management. One is 'Big Data' and the other is cloud computing. The recent years have seen a massive expansion of Data Analytics because of the low cost of acquiring data and the ease of availability as more of the data is being created digitally which makes business to easily access very refined data.

Some of the important characteristics of Big Data include using text and partially structured data for additional insight as well as the decreased time gap between data acquiring and decision making, experimentation on deep analytics as well looking for low cost and expandable analytic platforms. Moreover, cloud computing is not only taking over the business industry but as well as the IT Industry with its ambitious feature of platform as service. The aim of such a platform is to enable to create scalable application without being restricted by virtual machines. (Chaudhuri, 2012) Cloud provides a platform to transfer applications or data to the cloud and accessing new applications and data from it making it profitable for businesses to easily access what they require instantly. Moreover, aside from the benefit of access of huge amounts of information cloud has other advantages such as Safety, Privacy and Confidentiality as well as Regulations for installation of applications from the cloud. (Dr. AnamikaBhargava, 2015) The word privacy is used for all areas of access to data. As the continuous use of online services and mobile devices continues to proliferate the concern over access and sharing of personal information is increasing.

II SMAC

SMAC (social, mobile, analytics and cloud) is the concept that the convergence of four technologies is currently driving business innovation. SMAC is the basis for an ecosystem that enables a business to transition from e-business to digital business. The four technologies improve business operations and help companies get closer to the customer with minimal overhead and maximum reach. The proliferation of structured and unstructured data created by mobile devices, wearable technology, connected devices, sensors, social media, loyalty card programs and website browsing is creating new business models built on customer-generated data. None of the four technologies can be an afterthought because it's the integration of social, mobile, analytics and cloud together that creates a competitive advantage and new business opportunities.

Fig1: SMAC

III EVOLUTION AND RISE OF SMAC

The term SMAC was coined in 2011 or 2012 to describe the impact of the consumerization of IT. Enterprise computing consisted of one-to-one communication and of software and hardware that lived on premises. The introduction of mobile devices and the increased reliance on cloud computing upended the traditional computing model.

The technologies under the SMAC umbrella are.

Social: Social media platforms such as Twitter, Facebook, Instagram and Snapchat have provided businesses with new ways to reach, interact with, target and acquire customers. It has given rise to new job titles such as social media influencer or digital influencer, new marketing tactics such as viral marketing campaigns, and new data sources such as likes, reposts, hashtags and network connections.

Mobile: Mobile technologies and platforms such as the iPhone and the iPad, have changed the way people communicate, shop and work. The introduction of connected devices and wearable devices, both of which rely on cheap sensors to generate and transmit data, are the basis for new business models and new services offered to customers.

Analytics: Data analytics allows businesses to understand how, when and where people consume certain goods and services. It is also used as a predictive indicator for future customer behavior as well as when physical assets, such as parts of a jet engines, will experience degradation. As the cost for processing power and storage decreased, analytics became a top priority for companies. The open source project Apache Hadoop ushered in a new era of analytics called big data.

Cloud: Cloud computing provides a new way to access technology and the data a business needs to quickly respond to changing markets and solve business problems. It ushered in a new way to build infrastructure, platforms and services. Amazon Web Services was one of the big disruptors in this space.

Fig2. SMAC Umbrella

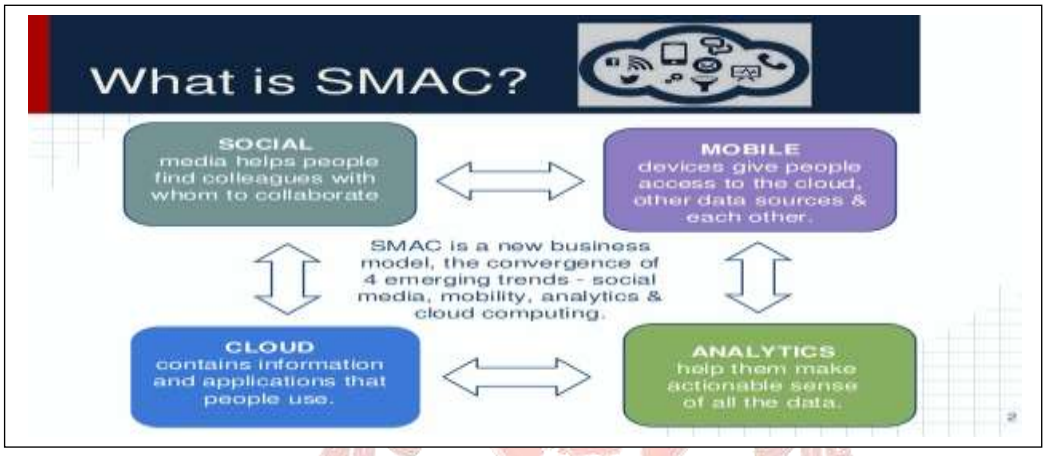

Fig3 SMAC

ANALYTICS CLOUD

Social data includes information harnessed from the user activity on Twitter, Facebook, LinkedIn and Pinterest, etc. The data is gathered regarding user interests, likes, events they attend, family demographics all of which will be gleaned to produce structured data that helps in further analysis and future social media campaign. In terms of SMAC, the Social data is studied along with Mobile data and therefore better analyzed.

MOBILE: The Fastest Way to Communicate with Anyone on the Planet Mobile devices are the cornerstone of how new businesses are being built. Mobile devices allow users to constantly keep their profile updated, keep track of deals and promotions, and track locations and buying habits by virtue of connecting to available options such as wireless signals and devices. From the data collected from mobile activity of users, a detailed report can be prepared about user interests, demographics, geography, likes, dislikes, etc. which along with social media data can provide detailed analysis which helps in effective digital marketing

ANALYTICS: With the increase in the dependence on IT, the databases worldwide has been growing into gargantuan proportions. The advanced processors have become capable of processing millions of bytes of data within minutes or seconds. Analytics here plays a very vital role in making meaning out of the unstructured data

and processing them to give out comprehensive reports. It can establish links between platforms and give out smart and intelligent predictions about future customer behavior based on their past performance as well as interests.

Cloud: The cloud in SMAC is the primary section since it has the capability to spin up large amounts of data within seconds. Competent cloud service providers make sure of the data security. The service is mostly on a pay-as-you-go model and charge only on the space usage or may be also be billed in a time-bound manner. With the growth in the size of business and hence the information, they don't need to spend too much on dedicated data warehouses anymore. They can take up or stop using cloud services as per their requirement time to time.

IV SMAC FOR EDUCATION:

Method of teaching in educational institutions is changing. It is moving more and more toward supplying personal support for learning, and teaching to be an efficient member of the communities that one cares about. SMAC takes part in instructional establishments making education SMARTER, SMAC here refers to Social Media, Mobile, Ananlytics and Cloud technology.

Social Media Use in Education: Refers to the use of online social media platforms in academic settings ranging from elementary and secondary school to post-secondary education. Social media is becoming more accessible and easier to use, meaning that the age of students who are able to understand and use social media are getting younger and younger. According to a 2010 report, almost 75% of students use social media for educational purposes.

Integrating social media into education has been a controversial topic during the 2010s in which people have continued to debate on whether or not these types of medias have a place in the classroom . Many parents and educators have been fearful of the repercussions of having social media in schools and there are concerns that social media tools can be misused for cyberbullying or sharing inappropriate content.

Facebook:

Using Facebook in class allows for both an asynchronous and synchronous, open speech via a familiar and regularly accessed medium, and supports the integration of multimodal content such as student-created photographs and video and URLs to other texts, in a platform that many students are already familiar with.

Further, it allows students to ask more minor questions that they might not otherwise feel motivated to visit a professor in person during office hours to ask. It also allows students to manage their own privacy settings, and often work with the privacy settings they have already established as registered users.

Facebook is one alternative means for shyer students to be able to voice their thoughts in and outside of the classroom. It allows students to collect their thoughts and articulate them in writing before committing to their expression. Further, the level of informality typical to Facebook can also aid students in self-expression and encourage more frequent student-and-instructor and student-and-student communication. At the same time, Towner and Munoz note that this informality may actually drive many educators and students away from using Facebook for educational purposes.

Twitter: It **c**an be used to enhance communication building and critical thinking. Domizi (2013) utilized Twitter in a graduate seminar requiring students to post weekly tweets to extend classroom discussions. Students

reportedly used Twitter to connect with content and other students. Additionally, students found it "to be useful professionally and personally". Junco, Heibergert, and Loken (2011) completed a study of 132 students to examine the link between social media and student engagement and social media and grades.They divided the students into two groups, one used Twitter and the other did not. Twitter was used to discuss material, organize study groups, post class announcements, and connect with classmates. Junco and his colleagues (2011) found that the students in the Twitter group had higher GPAs and greater engagement scores than the control group.

Gao, Luo, and Zhang (2012) reviewed literature about Twitter published between 2008 and 2011. They concluded that Twitter allowed students to participate with each other in class (by creating an informal "back channel"), and extend discussion outside of class time. They also reported that students used Twitter to get up-to-date news and connect with professionals in their field. Students reported that micro blogging encouraged students to "participate at a higher level". Because the posts cannot exceed 140 characters, students were required to express ideas, reflect, and focus on important concepts in a concise manner. Some students found this very beneficial.

You tube:

YouTube is a frequently used social media tool in the classroom (also the second most visited website in the world).Students can watch videos, answer questions, and discuss content. Additionally, students can create videos to share with others. Sherer and Shea (2011) claimed that YouTube increased participation, personalization (customization), and productivity. YouTube also improved students' digital skills and provided opportunity for peer learning and problem solving Eick et al. (2012) found that videos kept students' attention, generated interest in the subject, and clarified course content. Additionally, the students reported that the videos helped them recall information and visualize real world applications of course concepts. In the early 2000's right as YouTube was getting its start a man by the name of Salman Khan began uploading lecture videos. As his videos grew more popular Khan Academy was born and Salman began to expand his lecture topics in order to reach a wider audience of students. Today Khan Academy is still in use and its continuing positive impact on education is seen as well.

Advantages of Using Mobile Apps in the Classroom

Fig 4: Mobile app Advantages

The education research scholars are coming up with new techniques to impart knowledge every day. This includes exposing students to the kind of activities that engage them in learning through innovative ways. The need of the hour is to make students focus on their subject-oriented studies.As far as traditional methods are considered, it is expected to carry a satchel of books and copies and indulge into the traditional method of writing while learning. However, it is found that not every student can absorb knowledge while he is busy in writing its notes. Hence, it need to make sure that a student's focus is only on one thing at a time: This makes learning fun and more engaging.

NEW LEARNING METHODS

The introduction of applications in the education sector has led to the introduction of new learning methods. There are fun games available on mobile applications that indulge the students into a healthy thought process and help them understand things from a different perspective.

Enhanced Parent Teacher Communication

Parent-teacher communication apps help in building parent-teacher relations beyond the walls of educational institutes. This facilitates teachers responding to the queries from the parents regarding the development of their ward. It also helps in maintaining the transparency in the education sector.

E Books and Online Study

These days, students are generally very fond of online studying. This is where library apps and book search apps come into the picture. These applications make it easy for the students to search the appropriate study material in the mobile application. It keeps them closer to the study material and helps them in segregating their studying materials over the web.

Miscellaneous Functions

Various other student-related activities, such as online school payments and payments for other purposes, can be made through mobile applications. It saves the effort to stand in a queue and pay the fees for various purposes at school. Also, attendance-management apps maintain the attendance of students, so that teachers can have a keen eye on the students. It makes it easy for both teachers and parents to keep a track of the attendance of students

Decreased Communication Gap between Students and the Institution

It can be said that, following traditional methods, institutes cannot pay equal attention to all students. Now, however, it is possible to reach out to all of them. School communication apps make it possible to impart information to every student; they can inform them about new schedules, different forums, various conferences, and social school activities. Schools have long amassed data: tracking grades, attendance, textbook purchases, test scores, cafeteria meals, and the like. But little has actually been done with this information whether due to privacy issues or technical capacities to enhance students' learning. With the adoption of technology in more schools and with a push for more open government data, there are clearly a lot of opportunities for better data gathering and analysis in education. But what will that look like? It's a politically charged question, no doubt, as

some states are turning to things like standardized test score data in order to gauge teacher effectiveness and, in turn, retention and promotion.

BENEFITS OF CLOUD COMPUTING IN EDUCATION:

The benefits of cloud computing are being seen in associations and foundations regardless of how you look like at it,with pretty much 90 percent of associations starting now using some kind of cloud-based application.In the course of the most recent decade, the education business in India has become crucial. The education space is by a long shot the biggest industry promoted with government spending, up to 30 billion USD and private sector spending to 50 billion USD3.One of the biggest challenges that the government faces in providing education is the lack of infrastructure and if available, then maintenance of that infrastructure and other issue are Procuring and maintaining a wide range of hardware and software require ample, ongoing investment and the skills to support them. A solution to all this issue can be cloud Computing. It's a set-up of computing resources located just about anywhere that can be shared. Accordingly, by implementing cloud computing innovation, it can defeat all these short comes and keep up a unified framework where every one of the powers can check the education framework from every single angle and proceed with screen and guide the framework.

CONCLUSION

SMAC is the integrated technology of social, mobile, analytics, cloud platforms, where all together provide agile e-governance. It is recent trend in the field of IT with few drawbacks also. Presently the data available on internet as well as server of any business or government sector is very big which requires analytical storage on cloud and mobility access by social media. So SMAC technology plays very pivotal role in providing all functionalities mention above, looking forward to SMAC adaptation in education and health care will surely provide a better life to every individual.

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