Introduction to SMAC- Social Mobile Analytics and Cloud

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Abstract: SMAC (Social, Mobile, Analytics and Cloud) is an integration of four technologies that have become the drivers of innovation in businesses at present

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 behaviours 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 centred 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. AnamikaBhargava, 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. Moreover, the increasing trend in the volume of the data as well as the variety of it shows the importance of control over its access. The three pillars of privacy tools are 'access control, auditing and statistical privacy'. (Chaudhuri, 2012)

There are multiple examples of cloud computing being used in collaboration with social networks. The social network or applications are hosted on the cloud platform. Present research explores the idea of construction cloud infrastructure which leans on the social network because of their correlation and ease of user management. In this set up the users will give out their resources or third party resources based on the previous relations established on the social network. This type of cloud would be established as a social application on already existing social networks. The major benefit of such a system resides in avoiding the managerial capability of the application and using the ability of already existing social networks. (Moore, 2013)

It is predicted that in the year 2020, there will be around a 100 billion computing devices which will be in use of the internet and thus business will be taking more data load. With the use of SMAC technology small businesses will have the competitive edge as well

comparative to corporations to handle the data load and devise marketing schemes in the future. (Bowden, 2014)

Analytics uses the process of Data Mining also known as 'Knowledge Discovery in Databases' (KDD). The process of data mining uses a huge quantity of data to back the discovery of innovative and novel information using multiple threads of research including but not limited to computing, artificial neural networks, instance based learning, logic programming and statistical algorithms. (C. Romero, 2007)

Analytics however are not limited to business models, rather its use can expand into multiple fields. One such field is the field of education. 'Educational Data Mining which explored methods for creating innovative learning programs from the data generated from educational set ups to better recognise the students and their learning environments. (Ferguson, 2012)

In 2008, the government of Singapore financed a four year 'Future School Project' to make a futuristic appealing learning atmosphere with the support of Infocomm Technology. The most important part of this e-learning set ups is the course management. The course managers which include the teachers, course coordinators and designers for the e-learning systems require to make decisions about the content that needs to be given to the students and the types of strategies needed to be devised for the students. For this purpose, the students learning patterns of behaviour require to be modelled by looking at various factors from multiple information sources and domains such as performance records of students from university databases, policies of education from the relevant authorities, models of students from different institutes within the country as well as from international schools, the generalised trends of education as well as secondary data pertaining to students social patterns. All of these aspects need a strong and well implemented user driven framework for them to be synergized perfectly. (Bu Sung LEE, 2010)

Social Learning Analytics are intensely focused on learning theory. They put their attention on tools of learning that are relevant to learning in an online participating culture. They don't give attention to the summative individual assessment of students past performance. The focus of social analytics learning is on an environment where the learner is not alone and not doing a task that is eligible for marking but rather engage in social activities by directly interacting through messaging, adding them or following them or through the use of platforms where the activity of the learner can be accessed by learners; such tools being publishing, tagging, searching or rating. When groups involve in these joint tasks their success is judged through an amalgamation of individual knowledge and skills, the setting, the access of tools and the capacity to work in combination with others. Thus, to understand the process of learning in such settings it is need for the educationists to give attention to group proceedings of knowledge development such as how a group of people interact and learn together using the above mentioned tools in various environments. In short the object of focus must not be limited to just learners but also the tools they use and in what context. (Ferguson, 2012)

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