Assignment-2

Sai Hemanth Nirujogi
G01065588

Social Media: Instagram

Instagram is undoubtedly one of the world's most popular social network with over 800 million active users every day. Out of all the users 51 percent of them use Instagram on a daily basis. There are 80 million photos uploaded everyday into Instagram and users can interact with those pictures by liking it with a heart, hashtags and commenting. This creates enormous amounts of data to analyze by humans.

By using the hashtags and other trending data, users can find photos, videos, and stories for a event, place and topic to discover new experiences. Instagram Discover page gives you the results of photos and images based on previous likes and people they follow. Instagram also collects data that is very valuable asset to their advertising algorithm by collecting insights from the data. By gaining insights from the search preferences and like history, Instagram sells ads to companies who targets users with particular interests who might be interested in their product. Since Facebook owns Instagram, more than 60 percent of the Facebook users has an Instagram account making them custodians of many analytics information to help companies in advertising. [1]

Medicine and HealthCare: IBM Watson Health Cloud

The Medical data in the world doubles every 3 years, 7 trillion dollar health industry is unable to keep up with the stumbling rate at which the data is being produced. Health related information is being generated and collected every day in the form of medical records, clinical treatments, research, fitness bands, health apps in mobile devices, etc. [2]

IBM Watson health cloud is a centralized data hub which is packed with an advanced capabilities of learning, refining and organizing the data collected into useful knowledge for future operations. Tons of medical data (Volume) available in the world, it is hard to keep up with the treatments for a certain individual. Watson Health cloud app combines a diverse information (Variety) of personal health condition, family health history, fitness band data and previous treatments of every patient. This in turn helps the doctors, researchers and patients to access this open secure platform and monitor patient's health condition overtime. Massive amounts of data from every patient's medical records paces into the health cloud (Velocity) and protected in a private environment with limited and restricted access. This enables researchers, doctors and medical service providers to help

in the advancements of medical data and improve the treatment (Value) for the patient when needed.

“IBM Watson Health Cloud is a platform that is built for healthcare, adaptable to work over the healthcare ecosystem and to help organizations improve healthcare and life sciences while meeting privacy and creating an environment of trust.” [3]

Marketing: NCR

“Big Data refers to the ever-increasing volume, velocity, variety, variability, and complexity of information. For marketing organizations, big data is the fundamental consequence of the new marketing landscape, born from the digital world we now live in.” [4]

NCR is the leading company in consumer transaction technologies. It has successfully utilized different data sources to a basic level modernize its business capabilities. Big data has helped NCR to become the global leader in consumer transactions, and can analyze data without fail. Organisations focus more on showcasing to enhance its business and consumer satisfaction. Companies should really know how to market their products based on the consumers taste. The data NCR deals comes at a great pace (Velocity) which is in the various forms (Variety) of huge data sets (Volume) like transactions details, feedbacks and reports etc.

Types of big data, companies has to deal with while marketing [4]:

- Customer: Marketing may include behavioral, attitudinal, and transactional metrics from such sources as marketing campaigns, points of sale, websites, customer surveys and loyalty programs.
- Operational: Objective metrics that measure the quality of marketing processes relating to marketing operations, resource allocation, asset management, budgetary controls etc.
- Financially: This includes sales, revenue and profits and other objective data types that measure the financial health of the organizations.

Scientific Research: CERN

“Science and research is currently being transformed by the new possibilities Big data brings”. [5]

CERN is one of the world’s largest and most regarded centre for Nuclear research. This European Organization has a nuclear physics with world’s most powerful particle

accelerator. Over 30 Petabytes of data is analyzed using its 65,000 processors at CERN's data center, it also uses the computational power of computers in more than 150 data centers that are scattered across the globe. Computing powers like that can be utilized to change such a significant number of different ranges of science and research.

Massive volumes of data is being produced at a great velocities and the staggering rate is only growing. The power of big data is could likewise be applied to any data sets, opening up new sources top researchers. Statistical information and other government gathered information would more be able to effectively accessed and analyzed by scientists to help in achieving a better future for science and research.

Politics: 2016 US Presidential Election

Big Data analytics took a colossal part in 2016 US elections. Predicting the elections involves analyzing huge volumes of data acquired from various sources and different types like from social media, news channels, e-mails, phone calls and other sources which show the views of people on certain parties.

"The election prediction business is one small aspect of a far reaching change across industries that have increasingly become obsessed with data, the value of it and the potential to mine it for cost saving and profit making insights. It is the technology behind all this that quietly drives everything from the ads that people see online to billion dollar acquisition deals" [6].

The predictions before the elections were made by analyzing tons of data collected, which include the voter characteristics like age, region, religious beliefs, psychological characteristics and also issues that are promised to be solved by a party. Some published predictions made by analysts due to false public polls and false news reports can also result in drastic change of events. Relying on data analysis has its problems, without knowing the restrictions and false assumptions of the general population who create predictive models.

Citations:

1. Hope, Diana. “Instagram Is a Surprisingly Effective Big Data Source.” *SmartData Collective*, 2 Mar. 2018, accessed on 14th September 2018, www.smartdatacollective.com/instagram-surprisingly-effective-big-data-source/.
2. “The Impact of the Cloud in Healthcare, Today and Tomorrow - Watson Health Perspectives.” *The Analytics Maturity Model (IT Best Kept Secret Is Optimization)*, IBM Corporation, 8 Aug. 2017, www.ibm.com/blogs/watson-health/impact-cloud-healthcare/.
3. Burgess, Jan. “7 Big Data Use Cases for Healthcare.” *Ingram Micro Advisor, 8 Oct 2017*, accessed on 15th September 2018 www.ingrammicroadvisor.com/data-center/7-big-data-use-cases-for-healthcare.
4. “Big Data, Bigger Marketing” by SAS. Accessed on 15th September 2018. https://www.sas.com/en_us/insights/big-data/big-data-marketing.html
5. “10 Big Data Use Cases Everyone Must Read” by Bernard Marr, Data Science Central on December 2nd, 2015. Accessed on 15th September 2018. http://www.datasciencecentral.com/profiles/blogs/spark-or-hadoop-which-is-the-best-framework
6. “How Data Failed Us in Calling an Election” by Steve Lohr and Natasha Singer, New York Times on November 10th 2016, Accessed on 16th September 2018. https://www.nytimes.com/2016/11/10/technology/the-data-said-clinton-would-win-why-you-shouldnt-have-believed-it.html