

Big Data is Big Business: Big Data is Big Money

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Abstract

Tsunami of Big Data is here, what are you waiting for? Don't wait, don't sit and watch, grab this opportunity. Big data is new oil. Companies that are able to mine this resource will have an enormous advantage over those that don't. Big data is the most talked about topic of hot discussion these days among the CEO's and entrepreneurs. With the arrival of social media sites in the last decade, huge quantity of data is getting generated every hour. Hence, there is an alarming need to manage such unstructured huge volumes of data, which is known as Big Data. This article explains in detail the role that big data is playing in the age of 'Datafication'. It includes: how big data will generate new opportunities of employment, how big data can help economy come out from slowdown, how big data can be useful for marketing needs, how can big data provide new growth opportunities for IT software enterprises !.

Keywords

Big Data, Big Data Analytics, Sales and Marketing, Data Mining, Data Science, Business Intelligence (BI), Social Media, CRM, Data Farms

I. Introduction

Over the past decade, the world has seen an explosion of data on the Internet from the social media sites, mobile phones, sensors and cloud services; all of which is generating enormous quantity of data. This has led to the emergence of the term Big Data. Big Data is a computer science term describing a large dataset that it is awkward to manage. Handling of such datasets is very challenging. IBM's chief executive officer Ginni Rometty says: "Just like oil was a natural resource powering the last industrial revolution, data is going to be the natural resource for this industrial revolution. Data is the core asset, and the core lubricant, for not just the entire economic models built around every single industry vertical but also the socioeconomic models." According to Google's executive chairman Eric Schmidt: "From the dawn of civilization until 2003, humankind generated five exabytes of data. Now we produce five exabytes every two days and the pace is accelerating." Another entrepreneur quoted "Big Data is the new oil. The companies, governments, and organizations that are able to mine this resource will have an enormous advantage over those that don't". The volume of data is growing at an enormous rate. Managing large volumes of data is a challenging task, but it also opens the door of new business opportunities for IT software enterprises.

II. What is Big Data?

Any data, which is electronically circulated, is called Big Data. Suppose you are using E-readers like Nook and Kindle to read, then they are tracking your reading habits, gathering and generating data, which was not generated when these devices were not there. This is an example of Big Data. If you are listening to music on iPhone or other such digital devices then these devices are storing your music listening habits, thus generating data; earlier when you were listening to music on your Stereo, no data was gathered and stored. Smartphone's that you use today also gather data by tracking your location, your calling habits and monitoring your text messages. Global Positioning System (GPS) fitted into cars these days also gathers data about your movement and so do smart televisions, smart fridges and smart watches. Electronic sensors are also used these days for monitoring, viz., wind energy, power consumption, weather forecasting, traffic movement, etc. Now, let us see the social media websites like Twitter, Google+ and Facebook, which generate tons of Big Data every day. Many of you use your mobile phones for status updates, wall posts,

comments and likes on these social media websites. Billions of people around the world use Google to search each day, thus generating Big Data.

III. Impact of Big Data Analytics on Market

Analysing large amounts of data of numerous types to discover hidden patterns, useful correlations and other important information is called Big Data Analytics. This kind of information can provide competitive advantages over rival enterprises and can result in financial gains, such as increased profits. Big Data Analytics enables data scientists and researchers to investigate huge volumes of transaction data as well as other data sources that may be left unexploited by conventional business intelligence methods. Investigative Big Data broadly consists of social media activity logs, server logs, internet click activity logs, search engine reports and cell phone call records and other structured data.

Big Data Analytics supports marketing optimization by using historical data about individual consumers to predict their future buying behaviour. Big Data Analytics helps attribution that takes into account sales from a company's order channels as they come into their websites, mobile sites, call centres, and retail stores as well as activity in all of the marketing channels (e-mail, social media, display/retargeting, etc). It goes well beyond traditional methods and is significantly more accurate than simpler methods (last click, averaged, etc).

Big Data Analytics can assist governments in deciding the well-organized areas in which to build better infrastructure. It can help academicians access the effectiveness of certain academic programs. Big Data Analytics is already being implemented in the Energy sector for improving drilling and production performance.

IV. Growth

According to the editorial director of Twitter, Karen Wickre, "Twitter has become a true global town square — a public place to hear the latest news, exchange ideas and connect with people all in real time." The company reported on its 7th birthday this year (2013) that it's now seeing over 200 million active users send 400 million tweets each day, as compared to 340 million tweets per day in 2012.

Similarly, on the biggest social media website Facebook each day 2.5 billion content items are shared, 2.7 billion Likes take

place, 300 million photos are uploaded and 500+ terabyte data is ingested.

On its 8th birthday Google's YouTube revealed following interesting facts:

- More than 1 billion unique users visit YouTube each month.
- Over 6 billion hours of video are watched each month on YouTube—that's almost an hour for every person on Earth and 50% more than last year.
- 100 hours of video are uploaded to YouTube every minute.
- Millions of subscriptions happen each day, and the number of people subscribing has more than doubled since last year.
- YouTube is available on hundreds of millions of devices.
- Mobile makes up more than 25% of YouTube's global watch time, more than one billion views a day.
- YouTube has more than 15 million reference files in their Content ID database.

Data is a user generated entity, especially on social media websites like Twitter, Facebook, Google+, Instagram, Orkut, Foursquare, LinkedIn and Tumblr. Similarly, billions of internet searches take place each day, all these generate data which is called Big Data. IT software companies should focus on Data Quality, Data Governance and Data Stewardship. IT firms need new and innovative ways to analyse, visualize, and extract value from massive and growing datasets.

V. Future

Enterprises are turning to IT Software companies for the much-needed advice on how to manage their Big Data information. To exploit the data flood, enterprises will need to hire more employees, which will increase employment opportunities. These days businesses are processing more and greater varieties of data than ever before, which is being driven by advances in technology and internet connectivity. All this data provide organizations with greater opportunities to improve their consumer service, increase operational effectiveness and create new solutions. Big Data allows enterprises to incubate new ideas and check them rapidly before they are introduced to the regular product brand. Modern car manufactures are doing this regularly with prototypes, seeking new innovative ideas from prospective consumers.

According to Wikipedia, "Big Data" have increased the demand of information management specialists in Oracle Corporation, IBM, Microsoft, SAP, EMC, Software AG, and HP, and these software firms have spent more than \$15 billion on only specializing in data management and analytics. Similarly, according to McKinsey's study, there will be a shortage of talent necessary for organizations to take advantage of Big Data. By 2018, the US alone could face a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts with the know-how to use the analysis of Big Data to make effective decisions.

IT software enterprises need to make sure that they are ready to respond to these challenges. They need to develop plans for hiring and training professionals to make use of this emerging technology. At last, I conclude in one sentence: "Big Data is Big Business, Big Data is Big Money."

Sumit Goyal received his Bachelor and Master's degree from the central university of Government of India. He has published many research papers in many international journals throughout the world, which have been cited many times. Besides that, he has also written book chapters, instructional manuals, review articles, technical papers and brought out special issues of international journals, as Guest Editor. He is holding positions in the editorial board of many world renowned international journals. He's expert in Cloud Computing, Big Data Analytics, E-Commerce, ERP, Social Media Marketing/Advertising, E-Learning, Artificial Intelligence, Artificial Neural Networks, Machine Learning, HoneyNet, and Networking Servers. He has great experience in preparing B2B marketing, sales and advertising campaigns for IT Software Enterprises.