Emerging trends in analytics

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Abstract: In this paper we discuss the technology and enterprise-adoption trends in the area of business analytics. Also, you are able to see example and research results.

Introduction

While transformations in the business technology have mostly been apparent through cloud computing and smart technologies, innovations in the analysis of the business data have also been significant (Kohavi, Rothleder, & Simoudis, 2002). Trends in recording, encoding, extracting, and analyzing enterprise data have changed dramatically over the years and the forthcoming technologies are even demonstrating greater abilities in improving and enhancing business analytics. In their research, Kohavi et al. (2002, p.1) postulate that, "business intelligence systems and data mining analytic applications are now being better fused with transactional systems generating a closed loop between analyses and operations." In the business analytics world, several emerging trends have defined the actual transformations that people are witnessing. This essay seeks to examine the emerging trends in the business analytics.

The Business Intelligence (BI) Technologies in Business Analytics

BI technologies are among the tremendous technologies that have begun, and which may relentlessly continue reshaping the practice of business analytics. The trends in Business Intelligences have brought about advances in several spheres of the business analytics such as the multi-polar analytics, the cloud analytic technologies, fluid analytics, analytic ecosystems, and data privacy systems (Kohavi et al., 2002). To start with, one of the notable emergent technologies in the analytic realm is the manner in which data analytics are working with multi-polar analytics. *Multi-polar analytics* is a data processing and analysis method where analysts collect the big distributed data, store the data, and analyze it through a combined analytic model (Mitchell, 2014). This technology in data analytics reduces the chances of departmental corruption through data thefts.

Multi-polar data analytic technologies, also known as the analytic ecosystems, and already used in connected car ecosystem, are gradually helping companies to have a logical extension of their important information. Another prevalent and renowned technology that continually seems to reshape the world of business analytics is the *cloud analytic technology* (Mitchell, 2014). Cloud computing technologies have bolstered the handling and analysis of big enterprise data through the cloud innovations. Some of the common cloud technologies include the Red-shift hosted BI data warehouse of the Amazon Corporation, the Big Query data analytics system from the Google Corporation, and the Blue-mix cloud platform of the International Business Machines (IBM) Corporation (Richard, 2012). The cloud computing methods used in business analytics have enhanced data safety, data reliability, and data compactness.

Large and highly secure *analytic cloud technologies* from the trusted multinational internet and software corporations have enhanced data storing, data coding, database management, and data retrievals (Hota, 2013). The use of *fluid analytics* is another amazing data handling techniques that analysts have considered imperative instrument of the information systems in the emerging innovations. Popularly known as the big data lakes, the innovations of the fluid analytics have enabled corporate organizations to handle large chunks of data, provide high-level data definitions on these data, and create independent views on the recorded data (Hota, 2013). Mega analytic companies such as the PricewaterhouseCoopers and chief business technologists have considered fluid analytics as superior technologies that will bring massive change in the 21st Century era.

The *sophisticated predictive analytics* are other refined technologies that have helped firms to create large business data networks. Sophisticated predictive analytics help analysts to reduce large data, work with large numbers of data records, and receive quick insights and warning of potential data losses across the connected data networks (Bihani & Patil, 2014). Another emergent technology in the world of business analytics is the use of *Complex Event Processing* (CEP) methodology. *Complex Event Processing* are business analytic innovations and methodologies that enable analysts to examine streams of data coming from live sources for pattern detection and as business indicators that help entrepreneurs to take decisions (Bihani & Patil, 2014). In addition, The CEP methodologies help in achieving high event throughput, machine-learning algorithms on computationally impossible data, and in claims processing procedures.

Some of the remarkable predictive analytic tools include the Apache Spark and the Spark SQL business analytic tools. The improved use of *Structured Query Language* (SQL) on the *Hadoop,* which is one of the cloud data analytics that entails a framework and several sets of data tools used for processing extremely large data (Bihani & Patil, 2014). Integration of the SQL servers on the Hadoop has enabled the processing, coding, and storing of data in a faster, better, and enhanced procedure. Data analytic instruments that sustain SQL-like querying processes allow business owners with knowledge about SQL servers to enhance proper data storage and handling (Mitchell, 2014). This technique has offered support for commercial SQL-like query language through Pivotal Software such as the Apache Hive and the IBM-supported technologies.

Deep learning is another business analytic innovation that is continually promising several advances in the business analytics paradigm through its advanced analytic techniques (Mitchell, 2014). Deep learning technology describes a number of machine-learning techniques developed from the neural networking systems. Although the deep learning technology is still an evolving data analytics methodology, it has a great potential in supporting business development and business information processing by enabling analysts to classify items of interest in large data quantities such as that from the unstructured or binary data (Mitchell, 2014). Apart from automatic data detection methods, the deep learning analytic approach also helps the analysts to assume data relationships without using special models or special programming instructions from the fixed technologies and analytic software.

The last among the latest emergent technologies that are of significance in this discussion is the datafication method of business analytics (Mitchell, 2014). Datafication occurs when technology in business analytics is capable of revealing the formerly invisible procedures to enable an effective tracking and optimization of stored transaction data (Loshin, 2012). Although the process is still a conservative method that has undergone a series of transformations and altering with minimal changes in its original design and systems, new trends in the datafication have reemerged to help high processing speeds (Loshin, 2012). The demands for this methodology have augmented because of the growth and availability of the real-time operational analytics systems. In addition, the growing prices in the data gathering procedures have made the datafication models marketable.

Conclusion

Without forgetting the *in-memory databases* that have emerged as sufficient technologies that speed up analytic data processes in hybrid transactions and in the New HTAP systems, it is important to conclude that several emerging trends are currently supporting modern and prospective analytics. The emerging trends have shown and are continuing to show some significant transformations on how commercial organizations handle hybrid transactions, diverse relational databases, and large networks of information that are not easy to compute and store without these software. Cloud analytic technologies, the multi-polar technologies, Complex Event Processing (CEP), fluid analytics, sophisticated predictive analytics, deep learning analytic models, in-memory databases, and the use of Structured Query Language (SQL) on the Hadoop, are some of the emergent magnificent technologies that have great impact on business analytics.

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