An Analysis of Big Data Analytics Techniques

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ABSTRACT

Big data is structured, semi structured or unstructured large quantity of data amounting to petabytes or exabytes of data. The data can be mined to extract information. The big data can be usually referred by 3Vs which is volume, variety and velocity. The analysis of data can be done by storing it in a platform like hadoop and framework like mapreduce to process data. The data is stored as large data sets. Big data analytics is the process of examining this data sets to retrieve business information. This paper compares and contrast different data analytics techniques such as text analytics, audioanalytics, videoanalytics, social media analytics and predictive analytics. This paper also discusses applications of big data analytics. This paper proposes methods of improving big data analytics techniques.

Keywords-- Big data, Analysis, Legal cases

I. INTRODUCTION

The radical growth of Information technology has led to several complimentary conditions in the industry. One of the most persistent and arguably most present outcomes, is the presence of big data. The term big data is a catch-phrase was coined to describe the presence of huge amounts of data. This unlike the normal gigabyte, defines data that is larger than the traditional database can process (Watson, 2014).

The resultant effect of having such a huge amount of data is data analytics. Data analytics is the process of structuring big data. Within big data, there are different patterns and correlations that make it possible for data analytics to make better calculated characterization of the data. This makes data analytics one of the most important parts of information technology.

There are different techniques that are currently in use. In general, the techniques can be summed up to:
1) Association Rule Learning
2) Classification tree analysis
3) Genetic algorithms
4) Machine learning
5) Regression analysis
6) Sentimental Analysis
7) Social network analysis.

All classification techniques have come to inspire secondary definition types of forms of analytics like text analytics, and media analytics. The result for the categorization and classification of big data is that there is a variety of different manageable volumes of data can be transfer between persons at a high velocity. With these basic functions in perspective, there are different (R, P. M., 2013).

II. CLASSIFICATION TECHNIQUES

Association Rule Learning

This is the classification learning technique. It basically comprises of analysis of the data presented and finding relations between data presented. The result is categorization of data with similar characteristics together. It has been used in different spheres of life. For example, the use of association rule learning can be used in text analytics. Websites that depend on user frequency to determine their frequency of users on the site and hence the productivity of a particular site over another (Ratner&Ratner, 2011).

Classification Tree Analysis

Classification tree analysis is the best way in which different text data can be analyzed. Text analytics can also manifest itself in the form of classification tree analysis. Large historical data can be classified chronologically in through classification tree analysis (Watson, 2014).
III. APPLICATIONS OF BIG DATA ANALYTICS

There are several applications of big data analytics. The first and most evident applications is in business. Through business analytics, within big data, patterns in business can be identified so that the different niches in business are found can be maximized upon (Ohlhorst, 2013). Big data analytics can also be used in the analysis of large text that is transferred over the internet. Security intelligence is one of the most important tools that any government looks into when it comes to data analytics. It can therefore be used in the different aspects of data analytics (Ahmed, S. E, 2014).

IV. CONCLUSION

Big data analytics has been one of the most important breakthroughs in the information technology industry. The growth of the data that is being transferred the Information Communication Industry is getting to a point where it is becoming unmanageable (Watson, 2010). The use of big data analytics and extended storage spaces, like the Cloud has made it easier to manage the amount of data is processed in the internet. However, big data analytics cannot be the solution to all of the different problems are present due to the lack of storage space (Mohanty, Jagadeesh & Srivatsa, 2013). Compression should be incorporated in all analytic techniques so that the information that is realized at the end of analytic processing is reduced to a manageable size. Introduction of compression engines and techniques can improve the quality of information that is realized at the end of the analytics process (Davission, 1976).

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