Big Data

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Big Data is composed of a combination of structured, semi structured, and unstructured data, which is collected by organizations for information. Big Data is often characterized by the large volume of data, the wide variety of data types and the velocity of how much data is generated, collected, and processed. We use data analytics to uncover information such as patterns, market trends, correlations, customer preference, etc. This will help organizations make better business decisions. Data analytics resources such as technology and techniques help give organizations a way to analyze data sets and gather latest information. The analytics process includes data professionals collecting data from many fresh sources, such as semi structured data, and unstructured data. Some of the sources are internet clickstream data, cloud applications, social media content, mobile phone records etc. The next step is for the data to be processed. Data professionals organize, configure, and partition the data for analytical queries. The third step is for the data to be cleansed to improve its quality, looking for errors or inconsistencies like formatting issues and data being put in the wrong place. Now the data is ready to be analyzed with analytical software. This includes data mining which is sifting through the data looking for patterns and relationships, predictive analytics which is used to build forecast of future customer behavior and machine learning which hits many algorithms to analyze large data sets.

This topic relates to MIS2502 because in class we often went over structured, semi structured, and unstructured data and how semi structured data is a common way to transfer data between software applications and because plain text is universal, data sets are often posted using semi structured formats. I also learned in class unstructured data is everywhere and 70% to 80% of an organizations data may be unstructured data. Structured data is organized to a formal data model such as a relational schema while semi structured data has no formal data model but contains symbols to separate data elements, examples of semi structured data is CSV, XML and JSON. Lastly unstructured data has no data model or predefined organizations, examples include text documents and images.

An example of how big data is used is for transportation. Big data powers the GPS most of us use in our smartphones to get from place to place. Big data helps google maps alert you to the least traffic prone route to your destination. Route planning which has different itineraries for user needs, fuel consumption and other factors for maximum efficiency. Lastly traffic safety with real time processing and predictive analytics to find accident prone areas.

Works Cited

Chai, Wesley, et al. “What Is Big Data Analytics and Why Is It Important?” *SearchBusinessAnalytics*, TechTarget, 14 Dec. 2021,

“Big Data in Business: 9 Examples & Applications.” *MongoDB*,