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WHAT IS BIG DATA?

Artificial Intelligence (AI), mobile, social and Internet of Things (IoT) are driving data complexity, new forms and sources of data. Big data analytics is the use of advanced analytic techniques against very large, diverse data sets that include structured, semi-structured and unstructured data, from different sources, and in different sizes from terabytes to zettabytes. Big data is a term applied to datasets whose size or type is beyond the ability of traditional relational databases to capture, manage, and process the data with low-latency. And it has one or more of the following characteristics – high volume, high velocity, or high variety. Big data comes from sensors, devices, video/audio, networks, log files, transactional applications, web, and social media - much of it generated in real time and in a very large scale. Analyzing big data allows analysts, researchers, and business users to make better and faster decisions using data that was previously inaccessible or unusable.

Using advanced analytics techniques such as text analytics, machine learning, predictive analytics, data mining, statistics, and natural language processing, businesses can analyze previously untapped data sources independent or together with their existing enterprise data to gain new insights resulting in better and faster decisions. Quora and Facebook use Big data tools to understand more about you and provide you with a feed that you in theory should find interesting. The fact that the feed is not interesting should show how hard the problem is. Credit card companies analyze millions of transactions to find patterns of fraud. Maybe if you bought pepsi on the card followed by a big ticket purchase, it could be a fraudster? Big data describes a holistic information management strategy that includes and integrates many new types of data and data management alongside traditional data. Big data has also been defined by the four Vs: Volume. The amount of data. While volume indicates more data, it is the granular nature of the data that is unique.

Big data requires processing high volumes of low-density, unstructured Hadoop data—that is, data of unknown value, such as Twitter data feeds, click streams on a web page and a mobile app, network traffic, sensor-enabled equipment capturing data at the speed of light, and many more. It is the task of big data to convert such Hadoop data into valuable information. For some organizations, this might be tens of terabytes, for others it may be hundreds of petabytes.

The technological breakthrough is that the cost of data storage and compute has exponentially decreased, thus providing an abundance of data from which statistical analysis on the entire data set versus previously only sample. The technological breakthrough makes much more accurate and precise decisions possible. However, finding value also requires new discovery processes involving clever and insightful analysts, business users, and executives. The real big data challenge is a human one, which is learning to ask the right questions, recognizing patterns, making informed assumptions, and predicting behavior.

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THE IMPORTANCE OF 3D MODELING

Technology ferries imagination closer to reality, the best example to reinstate this is, how 3D modeling has changed the presentation world of architecture designs.

3D modeling is a technique that's used to create a 3D representation of any surface or object.

The 3D modeling process creates a digital object that's capable of becoming fully animated, making it an important process for special effects and character animation.

The created object is called a 3D model and such models are used in various industries.

Where can we use 3D modeling:

- Advertising and marketing - three-dimensional graphics are indispensable for the presentation of the future product. First we draw and then create a 3D model of the object. Using 3D-modeling for ads is more effective than standard photos or videos.
- Urban planning - cities are beginning to use 3D models to assist with city planning. A prime example of this is Virtual Brisbane. It was a project used by the Brisbane city council to create 3D models for development assessment, community engagement, and strategic planning. These techniques will help integrate people, which creates a more personalized approach to development planning.
- Industry - graphic designers create three-dimensional images of parts and objects to create prototypes of the object
- Production of exclusive jewelry - professionals artists and jewelery, victorious special programs, as well as original and unique programs.
- Computer games, cinematograph - almost every Hollywood film production team uses 3D modeling to speed up production, to reduce costs, and to make interesting 3D effects. For instance, the popular HBO series Game of Thrones uses 3D animation and modeling to mock up everything before filming it.
- 3D Integration to Planning Education - for instance, The University of Queensland launched a project where the researchers brainstorm, design, and implement an efficient curriculum in its Bachelor of Urban and Town Planning program. By making virtual 3D models, students can develop their spatial skills.
- Architecture and interior design - with the help of 3D-modeling technology, the customer can see how his home or office space will look like after repair.
- Real estate services - 3D tours can be very helpful when clients cannot visit a real estate object themselves.
- Medical field - during plastic surgery or surgical intervention, 3D graphics are increasingly used in order to clearly demonstrate to the patient how the procedure will go and what the result will be.

Thanks to 3D modeling, we can see more efforts being made to help improve our society 3D modeling is much more effective than traditional drawings and two-dimensional images of designed products, because it allows you to evaluate in detail the characteristics of the object at the initial stages of work.

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SMART HOME

Smart home – is a high-tech system. It can integrate and manage all your home communications at the touch of a button. There are a lot of systems which can be controlled with a smart home.

A system of light management allows you program light in your home or make your home presence visible while you are on vacation in another country. The heating control system will easily maintain the temperature in the whole room or in separate rooms. You can low it or