

## Continuous Assessment 1

Cource code: CAP456

Cource NAME? Introduction to Big Data

Section: D2112

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(1.) Make a documentation on different Sources of data in the field et big data. For all sources the practical use case should be discussed as example. Big palay Big data refers to massive complex structured and unstructured data sets that are rapidally generated and transmitted from a wide variety of sources. These attributes make up the three Vs of big data. (1) Volume: The huge amount of data being stored. (2) Velocity: The lightning speed at which Streams must be processed and analyzed. 1 Variety: The different Sources and forms from which data is collected, such as numbers n text, video, images, audio and text. These days, data is constantly generated anytime ove open an app, search Google or simply travel places to place with our mobile devices. The result, massive collections of Valuable information that companies and organisations need to manage store, visualize and analyse. Traditional data tooks are not equipped to handle this on kind of complexity and

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volume, which has led to a slew of specialized big data settware and sex architecture Solutions designed to manage the Load.

Different sorces of data in the still of big data and its practical was case discussed below:

1) Banking and Securities:

The sessempties Exchange Commission (SFC) is using Big dound to moritor financial market activity. They are custrelly using network analytics and nutural language processors to catch illegal trading activity in financial markets.

Retail traders, Big banks, hedge

funds, and other So-colled Big 1

boys in the financial markets

we big data for trade analytics

wed in high-frequency trading

pre-trade decision-support analytics

, sentiment measurement, predicate

atralytics etc. This industry also

heavily relies on big data for

risk analytics, including, anti-money

laundering, demand enterprise risk

9

Programo Ajania

management, "known your customes"
and "fraud mitigation". Big daya
provides are specific to twis
industy includes 1010 daya, Panopticon
Software, Streambaye systems, Nice
Actimize, Nice Actimize, and Quartet
Fs:

@ Gommunications, Media and Entertainment

Organisations in this industry simultaneously analyze customers data along with behavioral data to create detailed customers profiles that can be used to: - create content for different target audiences, Recommend content on demand measure content performance.

A case in point is the wimbledon Championship (You Tube video) that leverages Big data to deliver detailed sentiment analysis on the tennis matches to TV, mobile and web gsess in real-time.

-Amazon prime, which is driven
to provide a great customer
exer experience by offering video
, music, and kindle books in a
one-stop-shop, also heavily utilize

big data.

- Stotify, an on-demand music service, uses Hadoop Big data analytics, to collect data from its millions of usess constituide and then uses the analyzed data to give informed music recommentations to individual users.

#### 3 Healthcore Providers

The healthcase sector has access to huge amounts of data but has been plagued by failures in utilizing the data to curb the cost of rising healthcare.

Some hospitals, like Beth Israel are using dater collected from a cell phone app, from millions of patients, to allow doctors to we evidence-bosed medicine as administering several medical leb texts to all patients who go to the bospital. A battery of texts can be efficient but it can also be expensive and usually ineffective.

4. Education

Big data is used quite significantly in higher education. For example of Tasmanda. The university of Tasmanda. An Australian university with Over 26000 Students has deployed a Learning and management system that tracks, among other things, when a student logs outo the system, how much time is spent on different pages in the system, as well as the overall process of a student over time.

In a different use case of
the use of Big pata in education
it is also used to measure
teacher's effectiveness to ensure
a pleasant experience for both
Students and Teachers. Teacher's
performance can be fine-tuned
and measured against student
numbers, subject matter, student
demographics, student aspirations
behavioral classification, and several
other variables.

5 Manufacturing and Natural Resources

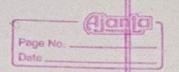
In the natural resources industry, big para allows for predictive modeling to support decision making that has been utilized for ingesting and integrating large amounts of data from genspatial data, graphical data, tent, and temporal data. Area of inse interest where this has been used include; seimic Interpretation and reservoir characterization.

Big data has also been used in Solving todays manufacturing challenges and to gain a competitive advantage, among other bonedits.

6 Goverment

In public services, Big Data has an extensive range of applications, including energy exploration, financial market analysis, fraud detection, health-related research and environmental protection.

The food and Drug Adminstration (FDA) is using by day to detect and Study patterns of food related illnesses and diseases



· This allow for a faster response, which has led to more rapid & treatment and less death

Big Data is being weed in the analysis of large amounts of Social disability claims made to the Social Security Administration [SSC) (SSA) that arrive in the form of unstructured data, The analytics are used to process medical information rapidly and efficiently for faster decision making and to detect suspicions or fodudulent Claims.

#### (7) Insurance

Big data has been used in the industry to provide customer insights for transparent and simpler products by analyzing and producting customer behavior through data tree toe derived from Social media, CAPS-enabled devices, and CCTV footage. The Big Data also allows for better customer retention from insurance companies.

When it comes to claims management , predictive analytics from Big Data

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has been wed to offer faster service since massive amounts of data can be analyzed mainly in the underwriting Stage. Fraud detection has also been enhanced.

## & Retail and wholesale Trade

Big data from Customer layalty data, POS, store inventory, local demographics data continues to be ag gathered by retaile and Woolesale Stores.

In New York's Big @ Data Show retail trade conference in 2014, companies like microsoft, Cisco, and IBM pitched the need for retail industry to Utilize Big Data for analytica and other uses, including through data from Shopping patterns, local events, and So on Reduced fraud and Timely analysis of inventory.

#### 9 Transportation

some user of Big data by hovermente, private organization, and individuals

include: - governments use of Big Data: traffic control, route Planning, ite intelligent transport Systems, congestion management.

Private - sector use of Big Data in transport: revenue management technological enhancements logistic and for competitive addatives advantage.

- Individual use of Big data include route planning to save on fuel and time for travel arrangement in tourism. etc.

# (19 Energy and Whilities

Smart meter readers allow data to be collected almost every 15 minutes as opposed to once a day with the old meter reader This granular data is being wed to analyze the consumption of untilities better, which allows for improved customer feedback and better control of untilities up.

In utility companies, the we of Big Data also allows for better

	Data	
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