	Page No.
	Date
	Unit 4 ! - Data Analytics priving into a
	Data analytics refers to qualifative & quantitative
	techniques & processes used to enhance productivity
	L'business gain: Data analytics is a broader term
	that has analysis as a subhead & analytics is bosically the concepts used to do analysis.
	basically the concepts used to do analysis.
	the algo can evaluate behavioud potterns
	knowledge building 4- decision making.
X	Data analytics lifecyde
ì	Discovery Buttony TXOT (ii
	i) Data prep.
di:	i) model planning to two primora primora
iv	model building cont to 25 Hybrid 1294 While
(3	Communicate results formation & priming +x=4
7	1) operationalize
	bed life remain 1 - Anthonneck or your mobile
	decices.
	Types A General ways data analysts extract patterns
	i) Data mining mithocilousiv of (iii)
3	Data visualisation asser without a stop
) '	v) Business Intelligence was to the form to
N/a	Monair of the Ameir well at 201der 2 mode 2 is
- 10	makes the dath easier for those making
	business decision to comprehend.
	Kens Ista Stempor I was the Bull of the Bu
	Real 1/2 Scenario 1 - Fixencise duda,

.5

Page No.	
Date	1

i) Data mining

large dataset. Data mining involves data collection, warehousing a computer processing.

cloud pend - 1 p finds

Real life scenarion: - In healthcare industry.
The algo. can evaluate behavioral patterns,
knowledge building 4 decision making.

ii) Text Analytics

Usually text analytics software relies on text mining & Natural language processing (NIP)

Deal·life scenarior. - Autocorrect on your mobile devices.

iii) Data visualization

Data visualization presents a clear picture; of what data certually means vising bor graphs pie charts, tables 4 other visuals, data visualization makes the data easier. For those making business decision to comprehend.

Real Life Scenario! - Excercise duta, energy usess,

weekly screen time chans

	Page No.
	Date
30)	Business Intelligence
SMI	It leverages analytics tools to convert
Hent	data to actionable insights oftenipaired
	with data visualization techniques,
rote	in Thromphie information & Gravial places of informa
	Real life Scenarion! - Use ct BI to capitalize.
oi.	en busi on constermen trends
41	2 extend customized offers
	in real-time.
134	1) Inaccurate data - Potantial mis-spellings exists
	data is simply inaccinate.
*	Data Analytics to tools a place of the Circulation
	on simple rules & legic.
i	Artificial Intelligence > makes decision that can
	provide plausible likelihood
	in achieving goal.
	- report philosop and resolute to see the
11)	Nosal Database -> Delivers method for accumulation
	and the same and fresheval of data. MA
	is Fix daming the FTL primar xi7 (ii
111	R organomina -> ASSISTS Dates Scientistists IM
	designing statistical software.
	of with property with poor douby quiets
74	) Data lakes
	softwofood passion (
	· Supplier - Had (ii
	ili) Reduced operation efficiency & productivity.
	withof situation (vi
	in the state of th

Extract Transform & Load.

## ETL -> Extract, Transform & Load.

Page No.
Date
(v) Business
ed multiple times
ta in incosistient
that which
s of information
KEN MER
or in diffrent
or in without

\* quality issues for data analysis

- i) Duplicate Data -> same deuter entered multiple times
  ii) Incoststent fermats -> sume type of data in incosistient
  format.
- iii) Incomplete information > (rucial pieces of information
- Data inconsistency -> Data in same field i.e. either in diffrent language or in diffrent units.
- J) Inaccurate data -> Potential mis-spellings exist or doubt is simply inaccurate.
- vi) Invalid data -> Data court possibly correct based on simple rules & legic.
- vii) Data imprecision:> Lack of precision. history (i.

\* where to address duta quality issues

- i) Address the lissue in the source of system.
- iii) Fix at meta-deta layer.
- muite source primpiest
- \* Risks associated with poor douter quality.
- i) missed opportunities.
- ii) Lost revenue.
  iii) Reduced operation efficiency & productivity.
- iv) customer dissortisfaction.
- v) Misanolysis

	Page No.
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*	
vi)	Reputational damage . sizploris svigginoses i
vii	Lack of compliance.
	Increased financial cost is in suitaines
	happend, the descriptive analysis pourides a
	verpouse to the question is all inappentil by
*	Data Analysis task who bointaid mitrisson
4	destribeands, while configures interest not from
	Defining the question and mission mil
11	collecting the idada is 5796 + a distromine to the
iii	cleaning the data more or was animated of
	Analysing the date.
	and the haring housen the wiells who the
	ii) Diagnostic Analysis
	The term of the second
*	Types of idaya some found sixtempoid
V	has happend. Diagnostic analysis digs delpo
(i	First party daita -> Structured & organised
	1 and 1 to 1 and 1 and 1 and 1 to 1 and 1
· iii)	Third party duta : > Unstructured date
Y	- The state of the
	iii) Predictive
*	Types of data analysis
food	o wet show a solution of anity to med sinte
<u>i)</u>	Descriptive Analysis
isii)	Diagnostic Analysis and all allagers alertano
chii	Predictive Analysis
(vi	Prescriptive Analysis.
v)	Cognitive Analysis.
*	
	A A A A A A A A A A A A A A A A A A A

strump propperation

opignos jo spos cio

i) Descriptive Analysis

Descriptive analysis identifies what has already happend. The descriptive analysis provides a response to the question 11 what happend! by presenting historical data of in the form of deshboards. While companies might not draw firm conclusion from any of these insights; it was summarizing a describing data will help them to determine how to proceed.

## ii) Diagnostic Analysis

Diagnostic analysis focusps on why something has happend. Diagnostic analysis digs deeper into descriptive analysis to discover the root causes of outcomes. Creating comprehensive information is an important part of diagnostic analysis.

## iii) Predictive

This ferm of analytics & makes prediction about future events based on prior date. The predictive analysis employs the infermation, welve gothered to generate reasonable predictions about what will happen next.

Page No.		
Date	1_	

iv) Prescriptive Analysis.

for the future will be bearing is allows you to make recommendation

v) Cognitive Analysis and girlswithola prinsontini

in its knowledge base for answers to queries that make sense.

- Analytics having human like intelligence and the care known as cognitive analytics.
- in cognitive analytics are frequently used
  - cen show patterns & correlations constitutions

Exploratory data analysis (EDA) is used by data scientists to analyse and investigate duta sets & summarize their pao main chaircitenistics, often: employing data visualisation methods. It makes easientistic to discover patterns, spot anamolies; test a hippothesis for cheek againmentans. EDA is primarcrily lyed to see what duta can reveal beyond formal modelling or hypothesis testing

tousk & provides better understanding of dates et ..

Page No.		
Date	1	

\* Importance of EDA iv) Prescriptive Analysis. inches It can help you identify obvious terrors; as well as better understand patterns within the date, detect outliers or anamalous events, finding interesting relationship among the wariableion ( Date scientists can use EDA to ensure the results they produce are validit applicable to any desired business outcomes of goods ! \* EDA HOOISHate I avil a primar soft ADA \* are known or agnitive analytics. i) clustering & dimension reduction techniques. ii) Univarient visualization in svitingo di iii) Bivarient visualization - 19miz - wildumiz. V) 12-means clustering. vi) Predictive models like linear regression in python. sizebour stad windows . viii) R programing language. Fxploratory duda analysis (EDA) is used by 1998 similar to avolver and investigate delete see \* Types of EDA! when our winds scinoning & employed data including the mission i) univarient Non-graphical sonly one variable. ii) Univarient grapliced > stem + leaf, Histogram; bar plot,
Box plots. iii) multivarient: granon graphical + > Two or more iv) multivarient graphical -> Bar plot or bor chart.