

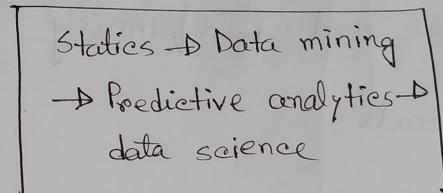
SIMPLE LINEAR REGRESSION

①

Data Scientist Course

Confusion # 1

Constant evolution of
the data science
Industry



Statistics → statistician

responsible for:-

- 1) gathering and cleaning data set.
- 2) applying statistical method.
with the i) growth of data and
ii) radical improvement of
technology, 3) needed
- 3) Extracting patterns from data .

Data science →

Data scientist

Kept up with modern technology.

Data mining → Data mining specialist

Kept up with modern technology.

responsible for all three and added :-

~~confusion~~
make new models from extracting patterns and performing more accurate forecasts.

We will learn :-

④ similarities and dissimilarities of :-

① Business analytics.

② data analytics.

③ data science -

④ business intelligence .

⑤ machine learning .

(2)

Predictive analytics → Predictive analytics specialist

Do these every work to analyze and predict better.

Analysis

Quantitative

Qualitative

Explain;
How and why
the company
fails?

date + how sales
decreases monthly
by months

Difference between Analysis

and Analytics

date + how sales
decreases monthly
by months

Business Analytics, Data analytics, and Data science

Business

Some business activities are data driven and others are subjective/experience driven.

* data science is a discipline reliant on data availability, when business analytics does not completely rely on data.

Complex math. ② statistical. ③ Prog. tools.

8

date + how sales
decreases monthly
by months

date + how sales
decreases monthly
by months

A graph with a vertical y-axis and a horizontal x-axis. The curve starts at a baseline level, remains relatively flat for most of its length, and then ends with a very sharp, high-frequency oscillating peak.

Analytics - Future Tech

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graph TD
    Quantitative[Quantitative] --- Qualitative[Qualitative]
    Qualitative --- Intuition[Intuition + analysis]
    Qualitative --- Formula[Formula + algorithm]

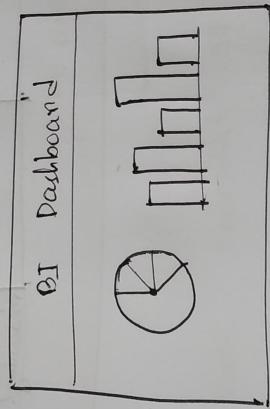
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knowing which fashion will be researched for introducing new fashion in which month.

Mostly part that uses:
1) complex math. 2) statistical. 3) Prog. tools

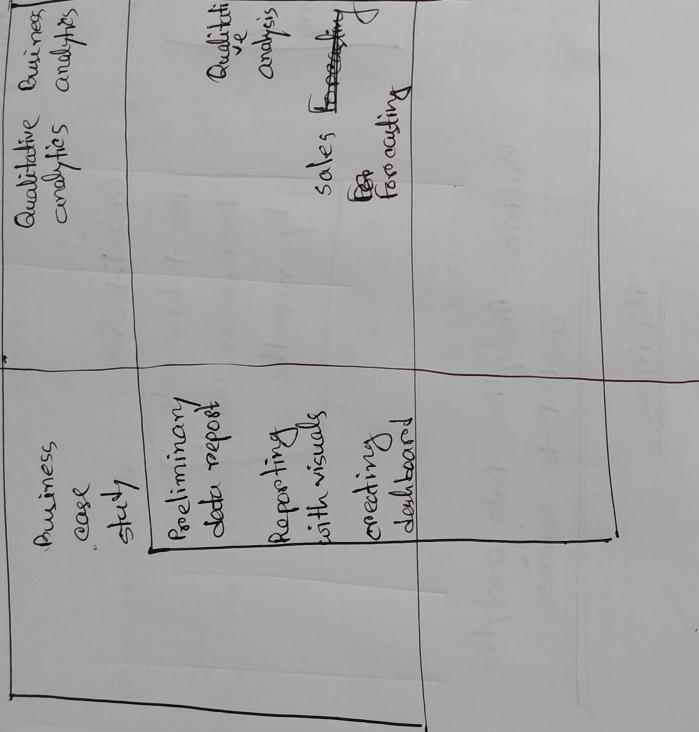
ADDING BI, ML AND AI

Business intelligence (BI): - The process of analysis and reporting historical business data aims to explain past events using business data.



- It is a preliminary step of predictive analytics
- Analyse past data and extract useful insight
- Create proper model.

Business intelligence (BI): - The process of analysis and reporting historical business data aims to explain past events using business data.



Qualitative analysis
sales forecasting
optimization of drilling process
digital signal processing

Data science analytics
data analytics

Past

Present

Future

(5)

Optimization of drilling process

Digital signal processing

Data science analytics

Data analytics

AI: simulating human knowledge and decision making with computer.

symbolic reasoning:- is based on high level human readable representations of problems and logic.

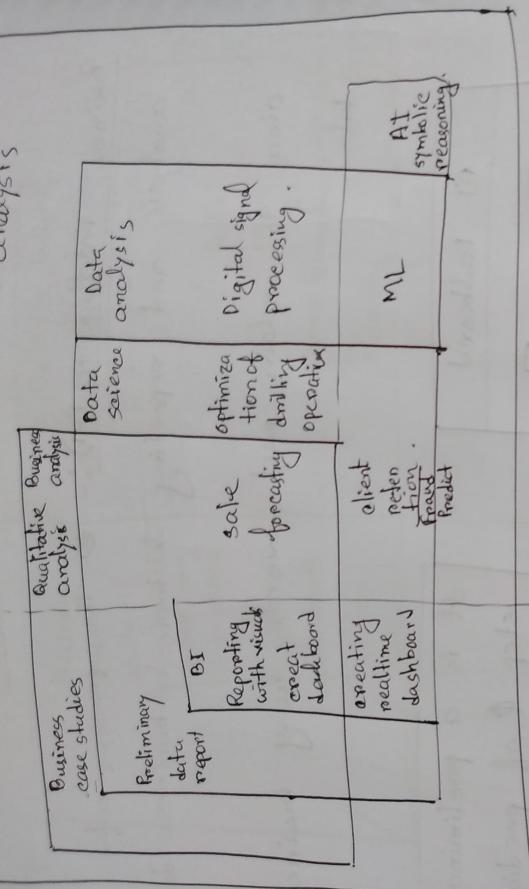
An overview of Data Science Infographic

* Data scientist is one of 20 with a proper dataset (The work of a data scientist starts machine learning! - with the data science

creating and implementing algorithms so that they can:-

- 1) make predictions.
- 2) analyse patterns.
- 3) give recommendation.

ML helps to develop a model to predict what a customer next purchase will be; client prediction.



(10)

Big data can be characterized with few letters.

1) SVs.

2) SVs.

3) TVs.

4) TVs.

v = vision / value / visualization

variability

and so on.

Big data

When are traditional data,
Big data, BI, traditional data
science and ML applied

(9)

what is data? \Rightarrow Data is information which is stored in a digital format, which can then, be used as a base for performing analysis and decision making.

Big data

Traditional data

Big like Terabyte, pedda bytes, even exabytes.

not only number / text, But also image data, from one computer.

what is traditional data?

\Rightarrow Structured data which can be managed

Traditional

Small

varney: number / text

output from huge dataset can be:
 \Rightarrow retrospective in real time (so called result).

SECTION - 3

- (1) structured.
- (2) semi-structured
- (3) unstructured.

Business Intelligence (BI)

Includes all technology-driven tools involved in the process of analyzing, understanding and reporting available past data to

- 1) make decisions.
- 2) extract insights.
- 3) extract ideas.

BI is all about understanding the past business performance in order to improve future performance.

Data Science

Traditional method perfect for predicting future

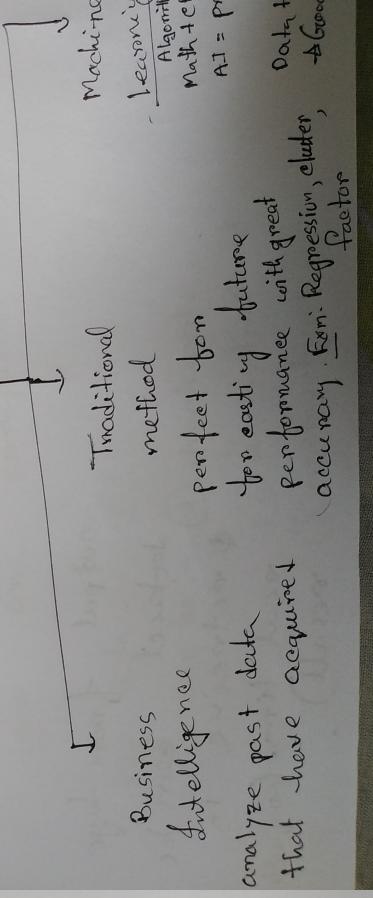
analyze past data that have acquired

Machine learning
Algorithmic
Math + CPU
AI = prediction
Data + AI
accuracy. Fnn. Regression, cluster, Good acc.

(11) All data you have in your hand, it's the beginning of analysis.

Data science: Tools:-

- statistical -
- mathematical.
- Programming
- Problem-solving
- data management.



(12)

SECTION - 4

The reason behind
this discipline

left of dotted line about past and
might is future.

solving a ~~the~~ business task to the realm of
data science.

Two most important areas are.

- 1) data (traditional / big data)
- 2) the application of data science
of the data.

If a data described what happen in the past
it is the job of ~~the~~ a business
intelligence analyst to study the numbers
and explain where and why somethings
went so well and others not so well

- * Data driven decision require well
organized and relevant facts data stored
in a digital form data which can be

Traditional method relates to traditional data,
we can tackle big data.

(14) processed and transformed into meaningful
and useful information.

