

Assignment : 4

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Subject: Data driven and decision making

Serial NO: 16

Course : BCA (cyber security)

Course code: ETCC

Submission Date: 10/11/25

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Task - 1 →

Real World Scenario:

Health care:

Health care is one of the compelling example of data driven decision making being used to revolutionize the industry. Healthcare industry with substantial amount of volume of data as EHRs patients, demographic, treatment histories. Late result

- use of DDDM in scenarios:

Hospitals using predictive model that flags patient's poor/with chronic illness for further care. This system use past data such as "EHR" improve patients outcome/medication for further prevention

Task 2:

composing Analytics Models →

1) Descriptive: (Insight from past)

- AKA What has happened
- summarizes historical/past data to identify patterns/trends and past relations
- use tools → R/Python/Power BI, Excel to compile past data

Example:

A retail store chain, virtual market platform analyze last quarter sales by region to see which product

The descriptive model does not predict future or provide actionable query but it established a factorial beam for more advance analytics.

2) Predictive → (Foresight into Future)

- aka what could happen likely
- uses historical data to predict future outcome
- use ML models, algorithms and tools like Python, SaaS

Example:

Ecommerce companies use ML to predict with consumers are likely to keep buying / cancel system in APP's like Netflix, Spotify.

⇒ Prescriptive → (What to do)

- Aka what should we do about it
- suggest optimal decisions / action based on prediction [suggest future course of used optimization algorithm (actions) and complex tools like CPlex and complex AI tools]

Example →

Logistics company used this model to determine best delivery route to minimize delivery cost/delay.

3 →

Internal / External data sources for Ecommerce company
company → Amazon

Internal:

- data generated within company / unique to company
- sales transaction:
details of what, when, where customers buy
- consumer reviews:
Insight of consumer satisfaction & quality
- inventory / logistic data:
stocks, warehouse records
- customer relationship management data:
Feedback, customer loyalty
- click stream data →
Time spent on website / browsing behaviour

→ External:

- data got / bought from outside the company
- competitive intelligence data:
for comparing prices and promotion strategies
- 3rd party market reports →
Industry trends from firms like Nielsen
- supplier partner data →
Performance / cost fluctuations.
- social media data →
Brand trends, sentiments, engagements on social media apps like Instagram, X
- Economics / demographic data:
Government data for inflation, customer spending
Unemployment affecting sales.

4 →

Reflecting on DDDM approach in Real life / Bus.

In daily life

adopting DDDM in Real daily life helps make evidence based decisions boost success outcomes personally. Also improving decision in health, fitness and greatly found useful in financial decision making

In Business:-

adopting data driven approach in business helps in making objective/evidence based decision rather than intuition/guess work boosting customer satisfaction/profits

→ overall benefits

- Great consistency in decision
- Faster response to change
- Continuous Improvement in decisions