

Assignment : 4

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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 evolutionize the industry. Healthcare industry with substantial amount of volume of data as EHRs patients, demographic, treatment histories. Late result

• Use of PDPM is scenarios:

Hospitals using predictive model that flags patients for (with chronic illness for further care. This system use past data. such as "EHR" Improve patients outcome/medication for further prevention

Task 2:

comparing Analytics Models →

1) Descriptive: (Insight from past)

- AKA what has happened
- summarizes historical / past data to identify patterns trends and correlations
- use tools → BI tools like Power BI, Excel to compile past data

Example:

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

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

2) Predictive \rightarrow (Foresight into futures)

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

Example:

E-commerce companies use ML to predict with consumers are likely to keep buying / cancel system in app's like Netflix, Spotify.

\Rightarrow Prescriptive \rightarrow (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 \rightarrow

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 customer 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 performance data →

Performance / cost fluctuations.

- social media data →

Brands 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 / Bues.
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:-

adapting data driven approach in Business helps in making object/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