TASK-1 →

Real World Scenario →

- Healthcare →

Healthcare is one of the compelling examples of data driven decision making being used to revolutionize the industry. Healthcare industry with substancial amt. of volume of data as EHRs, patients demographics, treatment histories, lab results.

- Use of DDDM in Scenario →

Hospitals using predictive model that flags patients for with chronic illnesses for further care. This system uses past data such as 'EHRs' which will allows doctors to schedule timely checkins, improve patient's Outcome / Medication for future prevention.

TASK-2 →

Comparing Analytics Models → [1, 2, 3 as VS]*

→ 1)* Descriptive → (Insights from past)

- AKA What has happened
- Summarizes historical / past data to identify patterns, trends & past relations.
- Uses Tools → BI's like Tableau, Power BI & Excel to compile past data.
- Example →

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

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sold the least & should be restocked.
- While descriptive model doesn't predict future or provide actionable query but it establishes a factual bcam for more adv. analytics.

→ 2) Predictive → (foresight into future)
- aka what could happen likely.
- Uses historical data to predict future outcomes.
- Uses ML models, algorithms and tool like Python, S
- example →

E-commerce companies uses ML to predict which consumers are likely to keep buying / cancel subscriptions in future.
Also used in recomendation system in app's like Netflix, Spotify.
- past anticipating future.

→ 3) prescriptive → (what to do).
- aka what should we do abt it.
- Suggests optimal decisions / actions based on predictions. [Suggests future course of actions]
- Used optimization algorithm and complex Tools like Gurobi, cplex and complex AI Tools.

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*Example>

- logistics company used this model to determine best delivery route to minimize delivery cost / delays.
- predicting future.

TASK-3 >

Internal / external data sources for E Commerce 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 / logistics data > Stock, warehouse records.
  - Customer Relationship management data > feedback, customer loyality data.
  - Click stream data > Time spent on website / browsing behaviour.

>> External >

- data got / bought from outside the company.
  - Competitive Intelligence data > for Comparing pricies and protmotion stratigies.

- 3rd party Market reports →
  Industry trends from firms like Nielsen
- Supplier partner data →
  performance / cost fluctuations.
- Social Media data →
  Brand trends, sentiments, engagement on social media apps like Instagram, X
- Economic / demographic data →
  Govt. data for Inflation, customer spending & unemployment effecting sales.

TASK-4 →

Reflecting on DDDM approach in Real life / Buss.

- In daily life →
  Adopting DDDM in Real daily life helps make evidence based decisions boost sucess outcomes personally. Also improving decision in health, fitness and greatly found useful in financial decision making.
- In Bussiness →
  adopting data driven approach in Buss. helps in making obj / evidence based decisions rather than intition / guesswork, boosting customer satisfaction / profits.

→ Overall benifits →
- Great consistency in decision
- faster response to changes
- Continuous improvement in decision.