

Assignment 1 Data driven decision making

Assignment 1 - Introduction to Data driven decision making.

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Task 1 - Describe a real world scenario where decisions are made using data.

Ans Scenario - Healthcare sector -

In hospitals, data is used to improve patient care. for example, doctor collect data about patient such as age, blood pressure, sugar level & past medical history.

By studying this data, they can find patterns - like which patients are higher risk of heart disease.

This help doctor make better decisions about treatment, diet plans, and medications.

So, reduce waiting time by analyzing patient follow patterns.

Task - 2 compare and contrast descriptive, Predictive, and prescriptive models.

Ans, Descriptive model explain what has already happened using historical data. A hospital dashboard showing the no. of patient treated last month.

- Predictive model uses past data to forecast what is likely to happen. predicting no. of dengue case in next 2 weeks based on weather and past trends.
- Prescriptive model should suggest what actions should be taken to get best outcome. suggesting how many doctors should be assigned to get emergency ward during peak hours.

key difference :-

descriptive - Past

Predictive - Future

Prescriptive - Best action to take.

Together these 3 models help organisation understand patterns, forecast needs & make better decisions.

Task 3 - Internal & External data source of a company.

Ans Selected company : Amazon  
(Internal data source)  
(Generated inside company.)

Sales transaction - customer purchases, returns.  
Customer profit - login into addresses, preferences.

Inventory records - stock levels, warehouse data

- o employee performance data - HR data, shifts, productivity.
  - o website analytic - search terms, time spent on pages.
  - external data sources = (collected from outside company)
  - o social media reviews - feedback from facebook, instagram.
  - o Market trend reports - industry research reports.
  - o competitor pricing - product price from flipkart, walmart, etc.
  - o supplier information - delivery times, product quality.
  - o Government / Regulatory data - tax rates, export regulations.
- These source helps amazon improve product recommendations, set competitive price, and manage logistics more efficiently.

Task 4 - Reflection - How data driven approach improves decision quality.

Aus - adopting data driven approach leads to smarter and more accurate decision in both daily life and business.

In daily life?

- Tracking expense help in better budgeting.
- fitness app used to guide exercise and diet routines.
- Navigation apps (Google apps) use real time data to suggest fastest routes.

In business :-

Data improve marketing by showing customers preference.

Help reduce cost by identifying inefficiencies.

Support faster decision making through dashboard and analytic tools.

Reduce risk by predicting future problem such as stock shortage or customer churn.

Overall, a data driven mindset increase confidence, improve planning, and lead to better outcomes.