DATA ANALYTICS PROCESS

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INTRODUCTION

Data Analytics is the process of collecting, transforming, organizing raw data into valuable insights, to draw conclusions, make predictions and drive informed decision making.

There are 5 types of data analytics:

1. Descriptive Analytics - Used to describe what happened in the past.
2. Diagnostic Analytics - Used to identify causes of problems and opportunities.
3. Predictive Analytics - Used to make predictions about future sales, customer behavior and other events.
4. Prescriptive Analytics - Used to optimize business decisions and process.
5. Cognitive Analytics - Used to understand and interpret data using artificial intelligence (AI) and machine learning.

DATA ANALYTICS PROCESS

There are 6 data analysis steps

1. Ask - Define the question or problem to be solved
2. Prepare - Collect data based on the task from multiple sources and store it for analysis
3. Process - Clean, transform and format the data
4. Analyze - Cleaned data is used to analysis and identify trends and to make some conclusions
5. Share - We make the conclusions into more understandable way by making it into virtual representations like graph or charts etc.
6. Act - To provide recommendations to stakeholders based on the findings so they can make data-driven decisions.

REAL-LIFE EXAMPLE

Real – life example of buying a television through e-commerce website.

Here are the 6 steps followed in the data analytics process of buying a TV in e-commerce process :

1. **Ask** (What do I need ?) :

In this step we define our requirements like brand, size (32 inches, 43 inches , etc.), type of screen (LED, QLED or OLED), type of TV (smart or 4k etc.) etc. and form the data we collect about our needs.

2. **Prepare** :

Next we need to set our budget based on how much we are willing to spend, e-commerce websites shows price range or even discounts.

3. **PROCESS :**

Start searching for TV's in e-commerce websites and filter out based on our preferences like size, resolution etc. Based on our preferences and past searches the websites algorithm uses filtering and machine learning to recommend TV's that fit our needs.

4. **ANALYZE :**

After filtering out the TV's we have to analyse that the TV's that we have shortlisted are worth. E.g. do the extra features justify the higher price ? Or how does this TV compared to other similar options in terms of quality and customer feedback.
E-commerce websites use data analytics to enable product comparisons by analysing specifications ,customer reviews and ratings.

5. **SHARE :**

After analysing and finding the best TV's we can share it with our friends and families to get their opinion so they can make their decisions.

6. **ACT :**

After gathering all the data we can finally go ahead and buy the TV by giving shipping address and making payment , then they will delivers the TV to our shipment address. This websites use the data analysis to optimize checkout process and provide future discounts based on our purchase.

CONCLUSION

Data analytics is used throughout the TV purchasing process from filtering out TV based on our preferred specifications to offering rewards or discounts and commendations. These makes the shopping experience faster, easier and more personalized.

THANK YOU