Trainity

Project #1
Data Analytics Process
Application in Real Life Scenario: Case Study

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Introduction

The term 'data analytics' might seem like a buzzword, courtesy of the number of times we hear it in routine conversations or see it online, from the annoying pop-up ads to extensive, in-depth discussions on it on social media.

The buzz around data analytics is also helped by the large number of organizations that are pivoting towards significant usage of this field within their structure, not just to improve their existing setups based on past data, but also to be able to predict future performance.

However, data analytics is not limited to multinational corporations and their engineers and managers. One would be surprised to know that the basic tenets of data analytics i.e., *Plan, Prepare, Process, Analyze, Share, Act*, are being followed by almost every one of us, regardless of our training or education, in ways that we did not know of. In this case study, we will try to put forward an example where data analytics plays a crucial role, even without us being conscious of it.

Case Study: Planning a Road Trip

The extensive prevalence of data analytics in our day-to-day life, without us knowing or identifying it, could be unknown to many. So, in the following example, we will show how data analytics pervades our lives and helps us take important and critical decisions almost every step of the way.

Assume that your friends have entrusted you with the responsibility of planning a road for the upcoming weekend. Let us now look at how you will employ data analytics to fulfil this task.

Stage 1: Plan

This is the first stage of your task. Now that you have decided to take a road trip, you must plan out the **destination** and the **number of people travelling**. Once you confirm these details, you move to the next step: preparing for the trip.

Stage 2: Prepare

Now that you have decided on your destination, you must plan your route. In order to do that, you must consider factors like:

1. What would be the starting point?
2. What is the distance to the destination?
3. What kind of traffic conditions could be expected?
4. Are there any points of interest along the way?
5. What is the estimated travel time?

Many other questions might also pop up, like whether you are taking a personal vehicle or a hired one, how large a vehicle would you need, etc.

All these questions can be answered by gathering relevant data to assist in your journey. This may include using navigation apps or websites that provide real-time traffic information, road condition updates, and weather forecasts. You must also collect information about attractions, accommodations, and dining options along the route.

Stage 3: Process

All the data collected from the previous stage is input into your navigation app or map software in this stage. The app or software processes this data to calculate the possible routes.

You will also be given information like estimated travel time based on probable traffic conditions, potential rest stops, and points of interest along the way.

Stage 4: Analyze

In this stage, you use the processed information to analyze the routes and related travel information.

You could also look for alternate routes depending on various factors like the impact of traffic congestion on travel time, the availability of amenities along the chosen route, the points of interest the route covers, etc.

You can also analyze weather forecasts to make informed decisions regarding appropriate clothing or alternate routes to take in case of adverse weather conditions.

Stage 5: Share

Once the analysis is complete, you can share the travel plans with your friends who will be travelling along with you.

Sharing insights such as estimated arrival times, potential rest stops, or interesting places to visit can help align expectations and gather suggestions or feedback from others.

Stage 6: Act

Based on the analysis and feedback, you make decisions and take actions during your journey.

For example, you may choose to take alternative routes to avoid heavy traffic, make stops at recommended attractions, or adjust your travel schedule based on real-time traffic updates.

By acting on the insights from such data analysis, you can optimize your travel experience and adapt to any unforeseen circumstances, ultimately resulting in a successful road trip with your friends.

Conclusion

As we saw in our example, the process of data analytics does not need specializations in programming or engineering or management. Rather, this is something that can be done by anyone in any of their day-to-day activities.

However, what must be noted is that data analytics is prevalent in various scenarios: from planning a road trip to planning what products to launch over the next quarter. In short, data analytics plays a vital role in almost every action we take today.