Understanding Data Analytics Process Using Everyday Life Example

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Table of contents

- Introduction
- Data Analytics Process
- Meet a friend
- Data Analytics in everyday life
- Stages of Data Analytics Process
- Conclusion

Introduction: Data Analytics in Everyday Life

Data Analytics is the systematic process of examining and interpreting data to derive valuable insights, enabling informed decision making in an individual's everyday life.
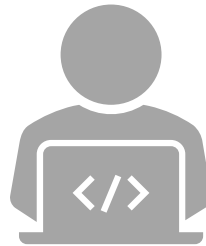
In our daily routines, we generate a vast amount of data through various activities such as fitness tracking, social media usage, online food ordering, shopping, and personal finance management.

Data Analytics involves analyzing this data using statistical techniques, algorithms, and visualization tools to uncover patterns, correlations, and trends that can drive actions and improve outcomes.

So, what exactly is the Data Analytics Process?

Given that data analytics is a **systematic** approach, having a well-defined framework or system in place is essential.

Hence, the **data analytics process** can be categorized into a structured **six-step framework** for practitioners: -

- **Ask**: This involves formulating the right questions to extract relevant insights from the data.

- **Prepare**: Identifying and collecting the necessary data required to achieve the desired results.

- **Process**: Transforming the data through cleaning and preprocessing techniques, ensuring it is ready for analysis.

- **Analyze**: Utilizing statistical and advanced tools to uncover insights, detect trends, and identify patterns within the data.

- **Share**: Effective communication plays a crucial role in the data analytics process, fostering collaboration and facilitating knowledge transfer among stakeholders.

- **Act**: Taking action based on the findings and insights derived from the analysis, as the true value of analysis lies in its application and impact on real-world outcomes.

It is important to note that analysis holds little value if its results do not manifest in tangible changes or improvements in practical scenarios.

Meet our friend, Harry!

- Harry was a dedicated professional who worked long hours, often leaving him with little time and energy for anything else. Due to his hectic schedule, Harry found solace in ordering food online, which became his go-to solution for satisfying his hunger. Unfortunately, this convenient habit took a toll on his health and fitness.

- As an avid football enthusiast, Harry longed to play the game he loved. However, he believed that his current fitness level would not be able to keep up with the intense demands of the sport. This left him feeling disappointed and disconnected from something that brought him immense joy.

- Over time, Harry noticed a significant change in his physical appearance and overall well-being. He realized that his sedentary lifestyle and unhealthy eating habits had caused him to gain weight and lose his fitness. Determined to take control of his life, Harry made a life-changing decision.

- Harry embarked on a journey to transform his lifestyle and find a healthier alternative. He sought to make positive changes by incorporating exercise and nutritious meals into his daily routine. No longer satisfied with simply ordering food online, Harry chose to prioritize his well-being and explore healthier options to fuel his body.

- With renewed determination, Harry set out to achieve his fitness goals and regain his love for the game of football. His journey would require commitment, discipline, and perseverance, but Harry was ready to take charge and rewrite his story.

- So how did Harry transform his life?

- **So the Question remains how did Harry transform his life?**

- Like Harry, we also face similar challenges in our everyday lives.

- Harry was well aware, just like many data analysts, that data has the power to narrate a compelling story and unveil hidden insights. In today's digital era, there is an abundance of data available, and Harry, being an avid user of smartphones, wearables, and smart products, constantly generated a substantial amount of data.

- Harry recognized that by leveraging the capabilities of data analytics in his daily life, he could unlock the untapped possibilities hidden within his data. This empowered him to optimize his decision-making, actions, and ultimately elevate his overall quality of life.

- Let us explore Harry's transformation journey through the lens of the "**data analytics process**," gaining insights into how data analytics played a pivotal role in his transformation.

1. Ask

"Knowing yourself is the beginning of all wisdom." - Aristotle

Harry was determined to gain insights into his **unhealthy eating habits** and sought answers to the following questions:

- On which days does he order food online?

- What are his unhealthy food preferences?

- How does his spending on **ordering food online** compare to cooking at home?

Harry aimed to assess his **fitness level** and sought to examine:

- The trends of his Body Mass Index (BMI) over the past six months.

- The extent of calorie deficit he maintains while undergoing a weight loss program.

- His activity levels on days when he does not engage in formal workouts.

In this phase of the data analytics process, the focus is on formulating pertinent questions that define and tackle the current problem statement effectively. By doing so, we gain a clear understanding of our current position and establish benchmarks for our desired future outcomes.

2. Prepare

Harry had to identify unbiased and accurate data sources based on relevance, reliability and alignment of the data to address his specific questions.

- For his **fitness tracking**, he collected data from his fitness tracking apps.

- For calorie **monitoring**, he started collecting and maintaining data in a diet management app.

- For **online food ordering**, he collected data from previous order history in the food delivering apps he was using.

- Harry also collected the data from his financial and **payment applications** to triangulate his data findings.

By rigorously identifying the data sources, Harry enhanced the validity and reliability of the data, he collected for analysis.

3. Process

When Harry looked at the data, he immediately understood that the data was not adequate for analysis.

He used data processing tools to clean the data which included: -

- removing irrelevant data like the food Harry had ordered for his friends, or

- Missing records like the meal which Harry forgot to track in his diet tracking app, or

- The outlier record of a cycling ride which Harry did not stop recording on the activity tracker app after finishing the trip etc.

These issues in the data needed to be dealt and handled well by Harry.

Thus, the collected raw data undergoes a transformation in this stage of the data analytics process so that the analysis, results in setting the right contexts for the insights it generates.

4. Analyze

- Analyzing the data involves using statistical techniques, machine learning algorithms, and visualization tools to uncover patterns, correlations, and trends that can drive actions and improve outcomes.

- By applying Data Analytics to fitness tracking data, Harry unlocked valuable insights into his exercise routines, sleep patterns, and overall health indicators. This empowered Harry to optimize his workout plans, monitor his progress towards fitness goals, and make informed decisions to achieve better results.

- Harry analyzed his food ordering history and financial transactions which helped him to track expenses, identify ordering and spending patterns, and make informed decisions about the choices he made with his food, in his transformation journey.

- Analysis of our own data empowers us to gain insights into our habits, behaviors, and preferences, facilitating self-improvement, informed decision-making, and goal attainment.

5. Share

In order to facilitate this transformation, Harry decided to share his data findings with a select group of fitness enthusiast friends.

Additionally, Harry sought guidance from professionals such as a dietician and the trainer at his gym, who possessed expertise in the relevant fields.

Through these discussions and the exchange of ideas and perspectives, more valuable insights were generated. Harry could now incorporate these insights into his actions, leading to improved outcomes.

6. Act

"Action is the foundational key to all success."

- Pablo Picasso

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- With the support of his fitness enthusiast friends and the professional guidance of his dietician and trainer, Harry took action based on the identified parameters to attain his desired level of health and fitness so that he could return to the field, where he would spend the weekends playing the sport, he loves the most, football.

Conclusion

- In our everyday lives, Data Analytics plays a vital role in making data-driven decisions. By leveraging the power of data, we can enhance productivity, optimize our routines, and improve our overall well-being.

- Data Analytics enabled Harry to uncover hidden patterns, identify trends, and extract meaningful insights from his own data. By harnessing this power, like Harry, we can all make such proactive choices, achieve personal goals more effectively, and strive for continuous improvement.

- Ultimately, the application of Data Analytics in areas such as fitness tracking, diet monitoring, financial management empowers individuals to take control of their lives, make informed decisions, and drive positive change.