

Website Traffic Analysis

– Phase 1

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PROBLEM STATEMENT:

This project aims to analyze website traffic data to extract valuable insights into user behavior, page popularity, and traffic sources, with the overarching goal of assisting website owners in enhancing the user experience. This endeavor involves defining specific analysis objectives, ensuring the comprehensive collection of website traffic data, utilizing IBM Cognos for data visualization, and integrating Python code to perform advanced analytics. By achieving these milestones, the project endeavors to empower website owners with actionable knowledge that will enable them to optimize their web content, marketing strategies, and overall website performance, aligning with broader organizational objectives.

DESIGN THINKING:

1.) Analysis Objectives:

Primarily, we have to define the objectives on what are things that we are going to extract from the data given to us. So at the end we will be able to get clear insights on

- The time intervals at which the traffic is maximum
- Compare traffic on different days and times
- Perform useful predictions to enhance user experience

2.) Data Collection:

We will be using the dataset provided by kaggle.com to carry on this project

<https://www.kaggle.com/datasets/bobnau/daily-website-visitors>

The above dataset contains necessary data like day, date etc. It also contains number of unique visits, first visits and returning visits which will be very helpful for us to enhance the user experience by identifying what they need the most.

3.) Visualization Strategy:

We will employ IBM Cognos, a robust data visualization platform, to create insightful visual representations of the collected data. This will include charts, graphs, dashboards, and reports that effectively communicate the findings to stakeholders. The visuals on which we will be most interest on are

- Graphs that depicts user traffic on different days
- Bar graphs which will be useful to compare between traffics
- IBM Cognos allows for the creation of interactive dashboards that provide a holistic view of website performance.
- Beyond predefined dashboards, IBM Cognos enables data exploration. Users can interact with visualizations, apply filters, and drill down into specific data points to uncover deeper insights

4.) Insights Generation:

Insight generation is a pivotal phase in the project, encompassing the extraction of actionable knowledge from website traffic data analysis. This process involves several key components:

- Identifying recurring patterns or trends within the data is essential. For example, spikes in website traffic during specific times can inform optimal marketing campaign scheduling.
- Data can be segmented into categories (e.g., demographics, traffic sources) to reveal distinct user behaviors and preferences, enabling personalized strategies.
- Predictive modeling helps forecast future trends, assisting in proactive planning and mitigation.

In summary, insight generation transforms raw data into actionable knowledge, driving strategic decisions, user experience enhancements, and digital marketing strategy improvements. These insights are the foundation of data-driven decision-making, benefiting both the website and the organization at large.