

Project 1 : Website Traffic Analysis

Project Definition:

The project involves analyzing website traffic data to gain insights into user behavior, popular pages, and traffic sources. The goal is to help website owners enhance the user experience by understanding how visitors interact with the site. This project encompasses defining the analysis objectives, collecting website traffic data, using IBM Cognos for data visualization, and integrating Python code for advanced analysis.

Design Thinking

Analysis Objectives:

1. User Behavior Patterns: Understand website navigation, popular pages, and bounce rates.
2. Visitor Engagement: Analyze time spent, return visits, and interactions.
3. Traffic Sources: Identify primary channels driving traffic.
4. Day and Time Trends: Explore behavior by day and time.
5. User Segmentation: Segment visitors by characteristics for in-depth analysis

Data Collection:

collecting website traffic data : Gather data on popular pages,traffic trends,user engagement, and visitor segmentation

Visualization:

1. Dashboard Overview: Create comprehensive dashboards with key metrics.
2. Behavior Flow Diagrams: Visualize visitor paths and drop-off points.
3. Time Series Charts: Use line graphs for trends over time.
4. Heatmaps: Highlight interaction hotspots on the website.
5. Segmented Reports: Generate reports for specific user segments.
6. Geographical Maps: Map out website traffic distribution.

Python Integration:

1. Data Preprocessing: Clean and prepare data for analysis.
2. Advanced Analytics: Perform complex analyses like clustering and predictive modeling.
3. Custom Visualization: Create specialized visualizations.
4. Integration with Other Tools: Combine data from various sources for comprehensive analysis.