

Problem Definition:

Problem Statement:

Website owners and businesses need a comprehensive website traffic analysis solution that leverages IBM technologies to gain valuable insights into user behavior, improve website performance, and enhance user experience.

Analysis Objectives:

- Identify the most popular pages and content on the website.
- Understand traffic trends by analyzing daily, weekly, or monthly patterns.
- Measure user engagement metrics like bounce rate, session duration, and conversion rates.

KPIs and Metrics:

- Identify key performance indicators (KPIs) and metrics aligned with the analysis objectives.
- KPIs: Pageviews, unique visitors, referral sources, conversion rates.
- Metrics: Time on page, click-through rates, exit rates, demographics.

Data Collection:

- Utilize IBM Cognos for structured data analytics, reporting, and data integration.
- Implement web analytics tools like Google Analytics for website data.
- Explore API integrations with external platforms for data enrichment.

Data Integration:

- Explore integration options to combine data from multiple sources:
- Integrate IBM Cognos with web analytics tools for real-time data retrieval.
- Automate data extraction and transformation to ensure data consistency and accuracy.

Visualization Design:

- Create prototypes of data visualization interfaces within IBM Cognos
- Design interactive dashboards that display popular pages, traffic trends, and user engagement metrics.
- Use IBM Cognos features to create meaningful visualizations like bar charts, line graphs, and heatmaps.

Python Integration:

- Develop Python scripts or applications to complement IBM Cognos analytics for automation and advanced analysis.
- Utilize Python libraries like Pandas, Matplotlib, Seaborn, or interactive libraries like Plotly for additional data processing and visualization.
- Implement APIs or SDKs for web analytics tools (e.g., Google Analytics) to retrieve data.