**WEBSITE TRAFFIC ANALYSIS**

**Empathize and Understand the Problem:**

Understanding the problem and the context. Why is analyzing web traffic important in Tamil Nadu? What are the specific challenges and concerns regarding online activity in the region? Gather insights from web administrators, digital marketers, and potential users of your analysis.

**Defining Clear Objectives:**

**Objective 1:** Analyze historical web traffic data to identify trends and patterns.

**Objective 2:** Identify webpages or sections with consistently high traffic or engagement levels.

**Objective 3:** Develop a predictive model to estimate future website traffic based on historical data and external factors.

**Ideation and Analysis Approach:**

Data Collection: Identify sources of web traffic data in Tamil Nadu, such as website analytics tools or server logs. Data Pre-processing: Clean and pre-process the data, handling issues like missing values, outliers, and data quality. Data Analysis: Use statistical analysis and visualization techniques to identify trends and patterns in the web traffic data. Traffic Hotspot Detection: Develop algorithms or criteria to identify webpages or content with consistently high traffic. Predictive Modeling: Choose a suitable machine learning algorithm to build the predictive model for future web traffic. Evaluation: Define metrics to evaluate the model's accuracy and effectiveness.

**Prototype and Visualization Selection:**

Matplotlib, Seaborn, Plotly, for visualization. Time series line charts to show web traffic trends over time. Heatmaps or graphical representations to identify popular webpages or content. Scatter plots or regression plots to visualize the relationship between different factors and web traffic.

**Build and Implement:**

Develop the full data analysis and visualization pipeline based on the refined approach.

**Test and Iterate:**

Continuously test the analysis and visualization progress, making adjustments and refinements based on feedback and new insights.

**Deliver Insights:**

Present the findings and insights in a clear and understandable manner. Use the selected visualizations to communicate trends, popular webpages, and the predictive model's accuracy.