

## **Phase 1: Problem Definition and Design Thinking**

### **Problem Definition:**

Website traffic analysis is the process of examining and evaluating the data related to visitors interactions with a website. This analysis involves studying metrics such as the number of visitors, page views, bounce rates, sources of traffic, user demographics, and more to gain insights into user behaviour, website performance, and the effectiveness of online marketing strategies. It helps website owners and marketers make informed decisions to optimize their web presence and improve user experience.

### **Design Thinking:**

#### **Analysis objectives:**

**Analyze how visitors interact with your website, including which pages they visit, how long they stay, and what actions they take.**

**Improve the website's design, navigation, and content to enhance user engagement, reduce bounce rates, and increase time on site.**

#### **Data collection:**

It's important to note that data collection should be done in compliance with privacy regulations, and you should be transparent with users about the data you're collecting and how it will be used. Regularly review and refine your data collection methods to ensure accuracy and relevancy for your analysis objectives.

#### **Visualization:**

Line chart, Bar chart, Pie chart, Area chart, Heat maps, Geographic maps, Funnel chart, Histograms, Scatter plot, Word cloud, Radar charts, Sankey diagrams, Stacked Bar or Area Charts and so on...these are used in visualization.

#### **Python integration:**

##### **Integration with Content Management Systems (CMS):**

For websites built on CMS platforms like WordPress, Python scripts can be used to extract and analyze website data by integrating with CMS APIs or databases.

**Automated Reports:** Automate the generation of regular reports by using Python scripts that fetch and analyze data and create reports in formats like PDF or Excel.

**Data Visualization:** Python's Matplotlib, Seaborn, and Plotly libraries enable you to create a wide range of visualizations to represent websi

**NOTE:**

File Naming Convention: **AI\_Phase1**

After completion upload your file to your private GitHub account. Please give access to your faculty evaluators of your college and industry evaluator [ [IndustryEvaluator@skillup.online](mailto:IndustryEvaluator@skillup.online) ] to your private GitHub repository for evaluation process

Go to the Project Submission Part 1 section and add your college code, the link of your GitHub in the space provided, upload your documents, and click on submit.