DATA ANALYTICS

Aim:

The aim of this project is Clearly understand the goals and objectives of the public health awareness campaign. Identify the specific areas or target audience the campaign aims to reach. Determine the key metrics or indicators to measure the success of the campaign.

Project Team:

Name	Mail-Id
U.Lavanya	keccse21062@kingsedu.ac.in
V. karpaga Idaya	keccse21053@kingsedu.ac.in
JP.Jeshma	keccse21051@kingsedu.ac.in
K..Harini	harinikannan1502@gmail.com

Problem statement:

" Analyze data from public health awareness compaigns to measure their effectiveness in reaching the target audience and increasing awareness".

Problem objective:

The objective of this project is to analyze data from public health awareness campaigns to measure their effectiveness in reaching the target audience and increasing awareness. By understanding the impact of these campaigns, website owners can make informed decisions to improve user experience and engagement.

Design Thinking steps:

1.Empathize: Start by understanding the target audience and their needs. Conduct research, surveys, interviews, and observations to gather insights on their awareness levels, preferences, and behaviors.

2.Define: Define the specific goals and metrics to measure the effectiveness of the public health campaigns. This could include tracking audience reach, awareness levels, changes in behaviors, or any other relevant indicators.

3. Gather Data:

- Collect relevant data related to public health awareness campaigns, such as campaign performance data, demographic data, social media data, etc.
- Ensure data quality and reliability by performing data checks and cleaning processes.

DATA SOURCE:

Dataset Link: https://www.kaggle.com/datasets/osmi/mental-health-in-tech-survey

4.Data Exploration and Preparation

Explore the collected data to gain insights into its structure, relationships, and patterns. Perform data preprocessing tasks like data transformation, dealing with missing values, handling outliers, and normalizing the data.

Visualize the analyzed data using charts, graphs, and interactive dashboards to communicate key insights effectively. Identify trends, patterns, and correlations within the data to generate actionable insights. Utilize IBM tools Tableau for data visualization.

5.Data Analysis:

Apply appropriate data analytics techniques and algorithms to analyze the data.Use programming languages for Python. Analyze the collected data to extract insights and trends. Look for patterns, correlations, and outliers that provide an understanding of the campaign's impact on the target audience and awareness levels.

6.Prototype:

Create prototypes of different data collection tools or methods that will allow you to measure the desired metrics. This could involve designing surveys, developing data tracking systems, or creating visualizations to analyze social media engagement.

7.Test:

Implement the data collection tools or methods to gather relevant data. Monitor and collect data throughout the public health campaign to track the effectiveness of different initiatives, tactics, or messages.

8.Iterate:

Based on the analysis, identify areas of improvement or potential changes to the campaign strategy. Use the insights gained to refine the public health campaign and make it more effective in reaching the target audience and increasing awareness.

<u>9.Implement:</u>

Apply the learnings and insights gained from the data analysis to refine future public health campaigns. Implement changes and improvements based on the data-driven findings to ensure continuous improvement and better results

development phases:

Gauge the effectiveness of the public health awareness campaign based on the analysis results. Continuously monitor and analyze data during the campaign to track progress and identify areas for improvement. Adjust strategies and tactics as necessary based on data-driven insights to optimize the campaign's impact.

- **84%** - inadequate **support** to mental health in tech
- **70%** - may have **experienced** mental disorders
- **53%** - don't have **medical** coverage for mental issues
- **70%** - don't have **forums** to discuss and seek help
- **Majority -** Physical Health **importance** >> Mental Health

Data visualization :

Utilize IBM Cognos to create visualizations such as bar charts, line charts, and pie charts to present key metrics and trends. These visualizations can help in understanding the effectiveness of the public health campaigns and their impact on the target audience.

<u>Statistical Analysis:</u>

Use Python libraries like NumPy, SciPy, and Statsmodels to perform statistical analysis on the data. This can involve hypothesis testing to measure the significance of the campaign's impact on awareness levels among the target audience.

<u>Machine Learning and Predictive Modeling:</u>

Utilize Python libraries like Scikit-learn or Tensorflow for machine learning and predictive modeling. This can involve building models to predict the effectiveness of future campaigns based on historical data.

<u>Dashboard Creation:</u>

Use IBM Cognos to create interactive dashboards that consolidate the analyzed data and visualizations. These dashboards can provide a holistic view of the campaign's effectiveness, allowing you to track progress and make data-driven decisions.

Report Communication and Presentation

Present the findings and insights to stakeholders, such as public health authorities, campaign organizers, or decision-makers.

Clearly articulate the implications and potential benefits of the analysis results for the public health awareness campaign. Use visual aids, slides, or interactive presentations to engage and effectively communicate the analysis outcomes.

IBM tools Tableau for data visualization
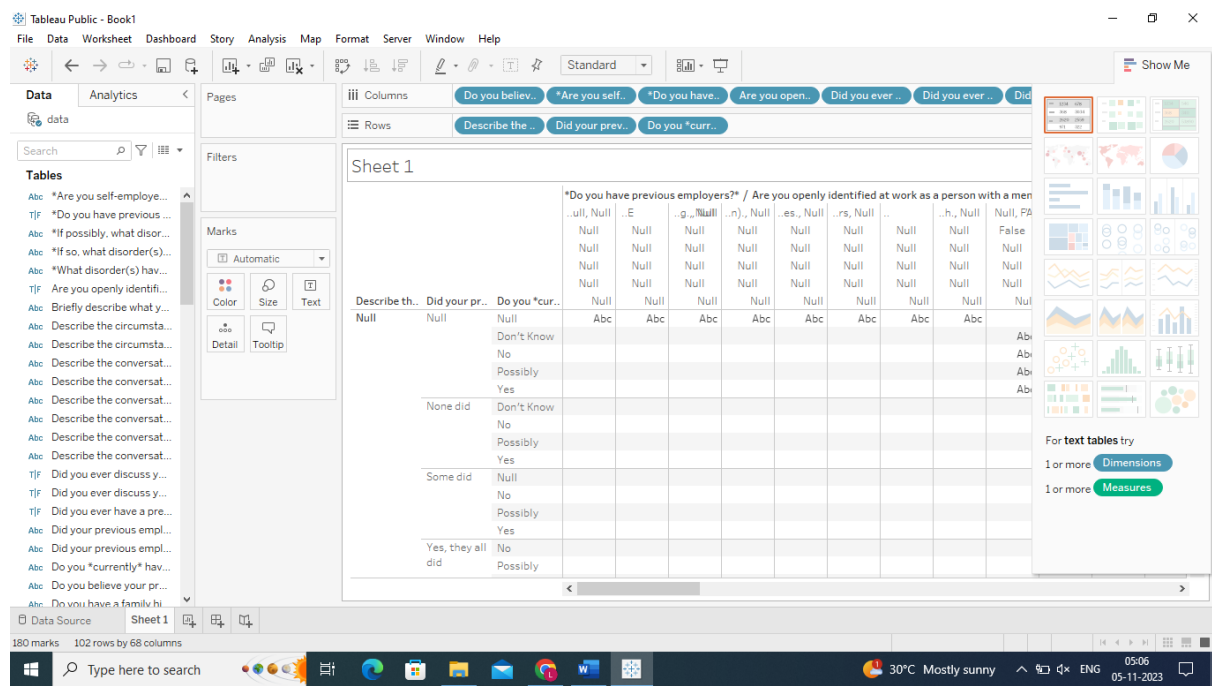
Analyze data from public health awareness compaigns to measure their effectiveness in reaching the target audience and increasing awareness insights from the analysis can help website owners improve user experience

Target audience identification:

By analyzing campaign data, website owners can gain a better understanding of the demographics, interests, and behavior of the target audience. This information can help them tailor the website's content, design, and functionality to better resonate with the audience and increase user engagement

Collaborate with healthcare providers:

Collaborate with local healthcare providers, clinics, or hospitals to track any spikes in appointments or utilization of relevant services during or after the campaign period. This can help measure the desired behavior change or increased willingness to seek healthcare.

- Support for Mental Health in Tech
- Mental Health Issues Experienced
- Medical Healthcare & Help Resources
- Importance for Physical & Mental Health
- Leave Policy for Mental Health Issues

Analyze website and social media analytics:

If the campaign uses online platforms, analyze website traffic, engagement metrics, and social media analytics to measure the number of unique visitors, page views, likes/shares, comments, and overall user engagement.

Evaluate media coverage:

Measure the number and quality of media coverage (e.g., news articles, interviews, press releases) generated by the campaign. Assess if the coverage was positive, impactful, and reached the target audience.

Post-campaign evaluation:

Compare the collected data post-campaign with the baseline data to determine if the campaign achieved its set goals and objectives. Identify key insights, successes, and areas for improvement in future campaigns.

Conclusion:

This project aims to conduct a comprehensive analysis of public health awareness, identifying key areas of concern, and proposing effective strategies to enhance public health education and awareness programs. The goal is to bridge the information deficit and empower individuals and communities to make informed decisions about their health, ultimately leading to healthier, more resilient societies.