PUBLIC HEALTH AWARNESS CAMPAIGN ANALYSIS

PHASE 1: "Public Health Awareness Campaign Effectiveness Analysis"

Project description:

The "Public Health Awareness Campaign Effectiveness Analysis" project aims to assess the impact and effectiveness of various public health awareness campaigns in reaching their target audience and increasing awareness. This project involves a comprehensive analysis of campaign data, the development of meaningful visualizations using IBM Cognos, and the utilization of code for in-depth data analysis. The insights gained from this analysis will inform future campaign strategies and decision-making processes.

Analysis objectives:

1.Collaborate with stakeholders to clearly define the specific objectives of the analysis Ensure that these objectives align with the goals of the public health awareness campaign. Example objectives have been discussed earlier.

2.Clearly define the specific objectives and goals of the analysis. These may include measuring the reach of campaigns, assessing changes in awareness levels before and after campaigns, and identifying key factors influencing campaign success.

3.Identify the sources and methods for collecting campaign data, including engagement metrics, audience demographics, and awareness surveys. Refer to the previous response for a detailed explanation of data collection methods.

4.Prepare a comprehensive report summarizing the project's objectives, methodology, data analysis results, and recommendations. The report should be clear, concise, and accessible to stakeholders.

Data collection:

Apply code-based data analysis techniques to derive meaningful insights from the campaign data. Depending on the complexity of the analysis, you may use statistical analysis, machine learning, or other data science methodologies.

Document all code, data cleaning processes, analysis methodologies, and visualization techniques used in the project. This documentation ensures transparency and replicability of the analysis.

Data set link: https://www.kaggle.com/datasets/osmi/mental-health-in-tech-survey

Visualization Strategy:

Creating informative dashboards and reports in IBM Cognos requires a well-thought-out visualization strategy. Here's a step-by-step plan to help you effectively visualize insights using IBM Cognos

1.Begin by understanding the needs and preferences of your target audience. Consider who will be using the dashboards and reports and what information is most relevant to them

2.Determine the key metrics and insights that are essential for conveying the effectiveness of the public health awareness campaigns. These should align with the analysis objectives defined earlier

3.Choose the most appropriate types of visualizations to represent the data and insights. IBM Cognos offers a wide range of visualization options, including charts, graphs, maps, and tables. Consider the following:

- Line charts for time series data (e.g., tracking campaign engagement over time).

- Bar charts for comparisons (e.g., comparing campaign impact across different demographics).

- Pie charts for showing the distribution of campaign reach across various channels.

- Heat maps to visualize geographic variations in campaign effectiveness.

- Tables for presenting detailed data and statistics

4.Create consistent dashboard layouts that follow a logical flow. Ensure that users can easily navigate

through different sections of the dashboard.

Use a clean and intuitive design with a clear hierarchy of information. Prioritize the most important insights and metrics.

5.Leverage IBM Cognos's interactive features to allow users to explore the data. Include interactive filters, drill-through options, and hover-over tooltips for additional information.

Implement parameterized reports and prompts to enable users to customize their views.

Code Integration:

Integrating code into your analysis process can significantly enhance the efficiency and depth of your analysis. Here's how you can decide which aspects of the analysis can benefit from code

1. Data Cleaning and Preprocessing:

   - Code Integration: Use code (e.g., Python, R, SQL) to automate data cleaning tasks such as handling missing values, removing duplicates, and standardizing data formats.

   - Benefits: Automation reduces manual errors, improves consistency, and saves time when dealing with large datasets.

2. Data Transformation:

   - Code Integration: Employ code to transform data, such as aggregating data over time periods, creating new variables, or normalizing data for meaningful comparisons.

   - Benefits: Code allows for complex transformations that may be challenging to perform manually, enabling better analysis.

3. Statistical Analysis:

   - Code Integration: Utilize code-based statistical analysis tools and libraries (e.g., pandas, NumPy, scikit-learn in Python) to perform advanced statistical tests, regression analysis, clustering, or machine learning.

- Benefits: Code enables rigorous statistical analysis and modeling, providing deeper insights into the campaign data.

4. Data Visualization Enhancement:

   - Code Integration: Customize and enhance data visualizations using code. You can create interactive charts and visualizations that may not be achievable with standard visualization tools alone.

   - Benefits: Code-based visualizations can be tailored to specific analysis needs, providing more interactive and engaging insights.

5. Automating Repetitive Tasks:

   - Code Integration: Develop scripts to automate repetitive tasks in the analysis process, such as data updates, report generation, or data extraction.

   - Benefits: Automation saves time, reduces the risk of human error, and ensures consistency in routine tasks.

6. Custom Analysis Modules:

   - Code Integration: Build custom analysis modules or functions that can be reused across different parts of the project or in future projects.

   - Benefits: Custom modules streamline the analysis process, promote consistency, and simplify complex calculations.

7. Integration with Data Sources:

   - Code Integration: Connect to various data sources and APIs programmatically to retrieve real-time or updated data for analysis.

   - Benefits: Real-time data integration allows for dynamic and up-to-date analysis results.

8. Scaling Analysis for Big Data:

   - Code Integration: Use code to analyze large datasets that may not be manageable with traditional tools. Consider distributed computing frameworks like Apache Spark.

- Benefits: Code-based analysis can handle big data efficiently, allowing you to uncover insights from vast datasets.

When deciding which aspects of the analysis to enhance with code, consider the complexity of the analysis, the size of the dataset, the need for automation, and the specific requirements of the project. Code integration can enhance the depth, speed, and accuracy of your analysis, but it's essential to balance it with usability and maintainability considerations.

BY:

Thanush PV

AU720921243057

JCT college of engineering

and technology