

Ideation Phase

Defining the Problem Statements

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Team ID	716
Project Name	6112-Public Health Awareness Campaign Analysis using Data Analytics

Public Health Awareness Campaign Analysis

Problem Definition and Design Thinking

Introduction

The task at hand is to develop a public health awareness system using data analytics. Public health awareness campaigns play a crucial role in promoting healthy behaviors within communities. Data analytics is a valuable tool for evaluating public health awareness campaigns. The ultimate goal is to prevent illness and improve public health.

This document will outline the problem statement, the steps involved in solving it, and the design thinking approach that will guide our project.

Problem Statement

Objective: Develop a data analytics-driven public health awareness system.

Data: We have a dataset containing various features of data sources (awareness campaign data, surveys, government health data). This data will be used for comprehensive health analysis.

Key Challenges:

1. Data Quality: Ensuring the dataset used for analysis is accurate.
2. Privacy and security: Public health data involves sensitive information so we have to handle it properly.
3. Data Integration: Combining data from various sources can be technically challenging.

4. Time sensitivity: Public health issues often require timely responses.
5. Resource constraints: Health organizations may have limited budgets so we have to choose the correct resources for awareness campaigns.

Design Thinking Approach

Empathize:

Understanding the importance of public health awareness campaigns, it's crucial to empathize with the challenges that data analytics brings. While data can provide valuable insights to target interventions effectively, protecting individuals' privacy, addressing biases, and overcoming resource limitations. Measuring the true impact of these campaigns is complex but essential.

Actions:

- Conduct survey with potential users to gather their perspectives.
- we take a steps to target audience.
- Seek feedback from healthcare experts in the medical industry.

Define:

Based on our understanding of the problem and the users' needs, we will define clear objectives and success criteria for our project.

Objectives:

- Prevention and encouraging people to take control of their health.
- Create a user-friendly web application for users to get the healthcare campaign informations.

Ideate:

Brainstorm potential solutions and approaches to address the problem. This phase involves thinking creatively and considering various algorithms and techniques for house price prediction.

Actions:

- Explore different algorithms such as dataanalysis, data visualization, security,notification,machine learning algorithms.
- Experiment with feature engineering techniques to enhance the performance of our project.
- Consider previous data sources (e.g. To improve campaign and target audience).

Prototype

Create a prototype of the interactive public health awareness platform with real time data analysis and personalized recommendations.

Actions:

- Conceptualization: Define goals and features.
- Design: Create wireframes and UI.
- Development: Build an interactive prototype.
- Testing: Gather feedback and iterate.
- Enhancements: Implement personalization, security, and performance improvements.
- Documentation: Prepare project documentation.

Test

Evaluate the model's performance using appropriate datas and gather feedback from users.

Actions:

- Split the dataset into training and testing sets.
- Train the model on the training set and evaluate it on the testing set.
- Collect user feedback on the web interface for usability and accuracy.

Implement

Once the prototype meets the defined objectives and receives positive feedback, proceed with full implementation.

Actions:

- Train the final project model on the entire dataset.
- Deploy the model as part of a production-ready web application.
- Conduct thorough testing to ensure the application is robust and user-friendly.

Iterate

Continuous improvement is essential. Gather user feedback and iterate on the website application and interface to enhance accuracy and usability.

Actions:

- Monitor the model's performance and retrain it periodically with updated data.
- Address user feedback and make necessary improvements to the web interface.

Conclusion

In this document, we've outlined our approach to solving the public health awareness campaign problem. We've defined the problem, identified key challenges, and laid out a design thinking approach that involves empathizing with users, defining objectives, ideating potential solutions, prototyping, testing, implementing, and iterating.

Our ultimate goal is to develop an accurate and user-friendly solution that provides valuable insights for people. By following this structured approach, we aim to create a reliable tool that contributes positively to the medical industry.