Project Title: Visualizing and Predicting Heart Diseases with an Interactive Dash Board

Project Design Phase-I - Solution Fit **Team ID: PNT2022TMID28916**

Define CS, fit into C

1. CUSTOMER SEGMENT(S)

CS

All adults. Especially people who are elder than 40 years and those who are in the verge of getting heart diseases due to various factors such as age, obesity, diabetes, stress, etc.

6. CUSTOMER CONSTRAINTS

CC

The patient's medical status must be continuously monitored. Unpredictability could lead to inaccurate results. The patient must be genuine about the periodic readings they record. The process could consume internet and could be slightly expensive.

5. AVAILABLE SOLUTIONS

AS

EDA: Exploratory data analysis is the key step for getting meaningful results.

Pros: Improve understanding of variables by extracting averages, mean, minimum, and maximum values, etc. Discover errors , outliers, and missing values in the data. Identify patterns by visualizing data in graphs such as box plots, scatter plots, and histograms.

Cons: Exploratory research comes with disadvantages that include offering inconclusive results, lack of standardized analysis, small sample population and outdated information that can adversely affect the authenticity of information.

Explore AS, differe

Focus on J&P, tap

2. JOBS-TO-BE-DONE / PROBLEMS

J&P

To predict and identify the heart disease patient. It is a very useful strategy that was used to control how the model can be utilized to increase the accuracy of prediction of Heart Attack in each

9. PROBLEM ROOT CAUSE

RC

The risk of heart disease is influenced by a number of variables, including smoking, body cholesterol, family history of the disease, obesity, high blood pressure, and inactivity. To stop the loss of

7. BEHAVIOUR

BE

To solve their problem, a suitable application must be available. To effectively diagnose the situation for their present health status, appropriate information such as age, weight, current symptoms, and cholesterol should be provided.

Focus on J&P, tap

Identify strong TR & EM

3. TRIGGERS

TR

The generation currently living now leads an extremely unhealthy lifestyle. People worry about the sharp rise in mortality from heart-related illnesses. They therefore desire to adopt a better lifestyle.

4. EMOTIONS: BEFORE / AFTER

EM

People frequently worry that their health will decline. They suffer unneeded tension and emotional breakdowns as a result of this. Our prediction system would enable them to keep track on their health independently and assist them in overcoming their erroneous concerns.

10. YOUR SOLUTION

SL

We classified heart disease using python and pandas operations for the data taken from the repository after analysing the outcomes from the existing approaches. It offers a simple to understand visual depiction of the dataset, the working environment, and the process of developing the predictive analytics. The machine learning (ML) process begins with a data preprocessing phase, which is followed by feature selection based on data cleaning, classification, and modelling performance evaluation. The accuracy of the outcome is increased using the Naive Bayes approach.

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8. CHANNELS of BEHAVIOUR

CH

8.1 ONLINE

- Data Collected from the offline devices is used in this application in order to visualize and predict the heart diseases

8.2 OFFLINE

- ECG
- Blood Sugar Level
- Blood Pressure
- Cholestrol

t a p i n

_ d e n t i f