Project Title: Visualizing and Predicting Heart Diseases with an Interactive Dashboard

Project Design Phase-I - Solution Fit

Team ID: PNT2022TMID21560

1. CUSTOMER SEGMENT(S) — CS

Clinics, to do a general screening on patients
Subsequent benefitters:
1. Doctors
2. People

6. CUSTOMER CONSTRAINTS — CC

- Lack of detailed medical knowledge of oneself
- Time constraints
- Network connection
- Insufficient medical techniques and instruments to collect the data

5. AVAILABLE SOLUTIONS — AS

Heart disease prediction is already done using data mining techniques. Lift Chart and Classification Matrix methods are used to evaluate the effectiveness of the models. All three models are able to extract patterns in response to the predictable state. The major challenge includes integrating data mining and text mining while observing the unstructured data vastly present. The relationship between attributes produced by Neural Network is more difficult to understand. This practice raises ethical issues for organizations that mine the data and privacy concerns for consumers.

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

To do predictive analysis with the current and the past data about the given heart disease dataset. Historical data is used to build a mathematical model that captures important features. The Visualization model is then used on current data to predict what will happen next, or to suggest actions to take for optimal outcomes as to predict whether the patient will likely get a heart disease or not..

9. PROBLEM ROOT CAUSE — RC

Disease prediction has the potential to benefit stakeholders such as the government and health insurance companies. It can identify patients at risk of disease or health conditions.Here our visualization model predicts the likelihood of patients getting heart disease. It enables significant knowledge, eg, relationships between medical factors related to heart disease and patterns, to be established which is currently a needed cause.

7. BEHAVIOUR — BE

Don't smoke. Smoking is a major risk factor for heart disease, especially atherosclerosis.
Eat healthy foods. Eat plenty of fruits, vegetables and whole grains.
Control blood pressure.
Get a cholesterol test.
Manage diabetes.
Exercise.
Maintain a healthy weight.
Manage stress

Focus on J&P, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS — TR

To conduct tests for a large group of people in short time in clinics.
People might feel necessary to have a testimonial on their health situation

10. YOUR SOLUTION — SL

The main idea of our project is to use classification and regression techniques in supervised learning inMachine learning. It is defined by its use of labeled datasets to train algorithms that to classify data or predict outcomes accurately. The result of the data analysis to identify the necessary patterns of heart diseases.

8.CHANNELS of BEHAVIOR — CH

8.1 ONLINE

User should give their vital inputs such as age, gender,Blood group, BP level, cholesterol level etc on the
website designed based on their statistics. The inputs are subjected to change for every user.

8.2 OFFLINE

Users measure their vital statistics in their home through smart devices such as smartwatches for BP level, heart rate, walking steps count etc in offline mode at the ease of their home. Even when needed, users can measure their vitals at a nearby scan center or lab.

Identify strong TR & EM

4. EMOTIONS: BEFORE / AFTER **EM**

Doubt --> clarity, assurance
hustle --> order
impropriety --> recuperate
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