## **Project Title: Visualizing and Predicting Heart Diseases with an Interactive Dashboard Project Design Phase-I - Solution Fit Team ID: PNT2022TMID18098**

# Pharmaceutical agencies Smokers Alcoholics Diabetes patients Hypercholesterolemia patients Hypertension patients Thrombosis patients Obese persons Peripheral artery disease patients

Angina patients

also skewed

support

Senior citizens Hospitals

1.CUSTOMER SEGMENT(S)

#### 6. CUSTOMER CONSTRAINTS



- Instant network connectivity
- Presence of good-condition communication devices like smartphones and laptops
- Financial constraints to consult specialists
- Lack of awareness about heart disease
- Complex and expensive scanning methodologies
- Psychological problems
- Lack of hope in treatment

#### 5. AVAILABLE SOLUTIONS



- Manual data visualization and prediction are very tedious
- Consult doctors (heart specialists), but it requires financial stability
- Quit smoking
- Restrain from alcohol
- Practice a healthy lifestyle with daily exercises and a nutritious diet plan
- Take cholesterol tests periodically

#### 2. JOBS-TO-BE-DONE / PROBLEMS

require complex integration

The data used for prediction should be accurate and reliable.

If data is skewed, then the prediction is

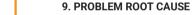
various metrics such as blood pressure, cholesterol levels, heartbeat rates, etc. that

Timely alerts help in the prevention of the sudden onset of cardiac arrests

Risk of lives depends on further medical

Predictions should be done based on







- Difficulty in predicting heart disease at earlier stages
- Lack of awareness about physical fitness
- Genetic problems
- Lifestyle and eating habits
- A buildup of fatty plaques in the arteries is the most common cause of coronary artery disease.
- Obesity
- Alcohol and Smoking habits
- Stress, anxiety, depression and psychological problems

#### 7. BEHAVIOUR



- Look up on the internet to find answers
- Visit healthcare specialists
- Take advice from friends and family
- Physical activity helps to lower the risk of heart disease.
- Adopting a healthy diet can help in improving blood pressure and cholesterol and also reduces the risk of diabetes.
- Reduction of intake of alcohol and cigarettes
- · Get quality sleep
- Prioritizing mental peace
- Develop unwanted mental trauma and anxiety about the aftermath of disease onset
- Falling into wrong assumptions and choosing the instant solutions that have worse side effects

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#### 3. TRIGGERS



10. YOUR SOLUTION



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- Insufficient ways to handle huge amounts of datasets
- Lives depending on medical support
- Symptoms such as chest pain, shortness of breath, etc.
- Lifestyle modifications
- Need to search for heart specialist at affordable price
- Need to apply for health insurance
- Anxiety and destructive curiosity
- Others getting treated due to earlier detection

#### 4. EMOTIONS: BEFORE / AFTER



#### Before

- Fear of being attacked by diseases that don't have improved treatments
- Confusion and lack of clarity about one's health conditions
- The anxiety of being hospitalized and the financial

#### After

- Clarity about the disease and its severity
- Peace of mind due to earlier predictions
- Financial stress relief

### The data is visualized with the aid of the IBM Cognos Analytics Tool for providing better insight into patients' health so that doctors could make better decisions

- With the notable technology of AI/ML and the given various metrics, heart diseases are predicted at an earlier stage and the same is displayed to the user in an interactive dashboard
- user in an interactive dashboard
  Healthy lifestyle habits such as eating a low-fat,
  low-salt diet, getting regular exercise and good
  sleep, and not smoking are user-specific
  suggestions are given
  Surgeries depend on the type of heart disease and
  the amount of damage to the heart, so suitable
  medical facility centers and specialized doctors are
  recommended

#### 8.1 ONLINE

- Surfing the internet for disease-related information
- Using apps that provide fitness suggestions

#### 8.2 OFFLINE

- Getting to know other people suffering from similar issues
- Visit doctors for a professional opinion
- Increasing the overall health conscious

