

Project Design Phase-I
Proposed Solution

Date	3 October 2022
Team ID	PNT2022TMID38367
Project Name	Project - Visualizing And Predicting Heart Diseases With An Interactive Dashboard
Maximum Marks	2 Marks

Proposed Solution :

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<ul style="list-style-type: none"> • Users create multiple analytical graphs/charts/Visualizations. • Using the Analytical Visualizations, build required Dashboard(s). • Saving and visualizing the final dashboard in the IBM Cognos Analytics.
2.	Idea / Solution description	Building the following visualizations and drawing appropriate conclusions: <ul style="list-style-type: none"> • Average Age for different Chest Pain Types • Average Max heart beat achieved during Chest Pain • Resting Blood Pressure variation with Age • Effect of Existing Heart Diseases on Average Max Hearbeats Achieved • Average age for Chest pain type wrt existing heart disease • Serum Cholesterol levels vs Age plot • Effect of Existing heart disease on Fasting Blood Sugar
3.	Novelty / Uniqueness	<ul style="list-style-type: none"> • Performing Exploratory Data Analysis on the chosen dataset, scaling and encoding features. • Using various linear classifiers such as SVM, Logistic Regression, and tree models such as Decision Tree, Random Forest, Gradient Boosting - to compare their performances and improve existing accuracy.
4.	Social Impact / Customer Satisfaction	The leading cause of death in the developed world is heart disease. Therefore, there needs to be work done to help prevent the risks of having a heart attack or stroke.
5.	Business Model (Revenue Model)	Key Partners: 3rd Party Applications, foundations, Govt. Agencies Cost Structure: Tech, Investment (fixed)

		<p>Revenue Streams: public and private contracts</p> <p>Customer segments: Middle aged people, older adults, patients already diagnosed with heart diseases or related illnesses</p> <p>Customer Relationship: Customer support, exclusive channels</p> <p>Customer channels: website, chatbot</p> <p>Value proposition: User friendly detection tool to detect heart diseases at the comfort of one's home</p> <p>Key Activities: Attracting new customers, retaining old ones, providing support, updating and maintaining data, platform development and maintenance</p> <p>Key Resources: Digital platform, loyal customer base, dedicated team</p>
6.	Scalability of the Solution	<p>There are 2 different ways to accomplish scaling for the proposed solution - Horizontal & Vertical scaling.</p> <p>This solution can be vertically scaled with increasing the capacity of existing dataset with no change in the code.</p> <p>In terms of horizontal scalability, the proposed model can be scaled wider to deal with the traffic. This can be done by increasing the GPUs (Graphical Processing Units) & TPUs (Tensor Processing Units) and working together as a single logical unit for faster access.</p>