

Project Design Phase-I
Proposed Solution Template

Date	14 OCTOBER 2022
Team ID	PNT2022TMID04327
Project Name	Project - Visualizing and Predicting Heart Diseases with an Interactive Dash Board
Maximum Marks	2 Marks

Proposed Solution Template:

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

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Heart disease is the main cause of death worldwide for both sexes and for members of the majority of racial and ethnic groupings. The diagnosis and treatment of cardiac patients are now fairly challenging due to a lack of appropriate diagnostic instruments and accurate outcomes. Invasive procedures are used to diagnose cardiac issues based on a patient's medical history, an expert's report on symptom analysis, and physical laboratory results. The objective is to reliably gather data on heart patients so that the hospital may use it to quickly visualise and anticipate patient information. Additionally, delays lead to erroneous diagnosis because of human intervention. Heart disease can be predicted based on a range of symptoms, including age, gender, pulse rate, physical examination, symptoms, signs of the patient, etc.
2.	Idea / Solution description	Our project's basic concept is to leverage classification and regression techniques in the IBM Cognos Analytics Application. Hospitals can determine the patient's health and heart condition with the use of the data set's parameters. To display the data and make use of it in the future, a creative and useful dashboard can be made.
3.	Novelty / Uniqueness	Inputs for parameters like age, blood pressure, cholesterol, smoking history, heart rate, etc. are taken directly from the user in the proposed system. IBM Cognos Analytics is used to discover links between input factors, respond to difficult queries more accurately, and offer the best solution.
4.	Social Impact / Customer Satisfaction	A major issue facing healthcare organisations, such as hospitals and medical facilities, is the provision of high-quality services at fair costs. Accurate patient diagnosis and effective therapy administration are required for the delivery of high-quality care. The database on heart disease contains both numerical and category

		<p>information. Before further processing, these items are cleaned and filtered to remove any unnecessary data from the database. Extraction of hidden knowledge, i.e., patterns and associations connected to heart illness, from a historical heart disease database can provide answers to complex problems for the diagnosis of heart disease. Therefore, it might assist medical practitioners in reaching informed clinical decisions.</p>
5.	Business Model (Revenue Model)	<pre> graph TD A([import patient document]) --> B([import dataset]) B --> C{Data mining} C -- No --> D([Fill the minig data]) D --> B C -- Yes --> E([Analyze the dataset]) E --> F[Train data] E --> G[Test data] F --> H([Proposed model]) G --> H H --> I([Check Accuracy Score]) </pre>

6.	Scalability of the Solution	<p>Simple patient details prediction for heart disease provides the greatest possible user experience.</p> <ul style="list-style-type: none"> • Lower Cost. • Make doctors' time management simpler faster and more precise virtual prediction. • Death rates. • Lessen the danger from crucial elements. • Thoroughly analyse with a focus on potential dangers.
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