

Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PPNT2022TMID29954
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)	According to WHO ,Heart disease is the leading cause of death globally ,representing 31% of all deaths occurred in low income countries and middle income countries. Therefore, there needs to be work done to prevent the risks of having a heart attack or stroke and to predict which patients are most likely to suffer from a heart disease in the future using the features given.
2.	Idea / Solution description	EDA is considered as analysing data that excludes inferences and statistical modelling. Analytics is an essential technique for any profession as it forecast the future and hidden pattern. Data analytics is considered as a cost effective technology in the recent past and it plays an essential role in healthcare which includes new research findings, emergency situations and outbreaks of disease. The use of analytics in healthcare improves care by facilitating preventive care and EDA is a vital step while analysing data. The analysis is carried out using a publicly available data for heart disease. The dataset is analysed with IBM Cognos analytics (visualization) tool and K means clustering.
3.	Novelty / Uniqueness	If three-dimensional (3D) imaging of congenital heart disease (CHD) could be more useful than two-dimensional (2D) visualisation for clarifying CHD anatomy and raising awareness. Stakeholders including the government and health insurance providers could gain from disease prediction. Patients who are at risk for certain illnesses or disorders can be identified.
4.	Social Impact / Customer Satisfaction	Generate Revenue by selling dashboards to Hospitals ,Diagnostics & Clinical centers. Smartwatch companies can use this dashboard as an application.

5.	Business Model (Revenue Model)	<p>The Successful Business Strategies to Prevent Heart Disease and Stroke Toolkit provides information, materials, and tools that state programs can reference and distribute to businesses, primarily through employer and professional organizations. The Toolkit also assists state programs in addressing these CVH priority areas:</p> <ul style="list-style-type: none"> • Providing health care coverage for employees and their families that includes primary and secondary prevention services addressing heart disease and stroke, as well as rehabilitation services for heart attack and stroke survivors. • Assuring detection and follow-up services with employees at the worksite to control high blood pressure and cholesterol. • Promoting adequate cost coverage or reimbursement for prescription drugs required
6.	Scalability of the Solution	<p>Using this approach, we show that up to 98% accuracy is achieved. We also present a comparison against Naïve-Bayes classifier, where we show the random forest approach outperforms the former by a significant.</p>