

**Project Design Phase-I**  
**Proposed Solution Template**

Date	19 September 2022
Team ID	PNT2022TMID04303
Project Name	<b>Project-22328-1659849255</b>  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)	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.
2.	Idea / Solution description	In order to reduce the risks of heart disease, early prediction is required. The dataset is pre-processed to check missing values, noisy data and to clean the data. The dataset is explored and visualised and then hybrid machine learning model is used for prediction of heart disease.
3.	Novelty / Uniqueness	Rather than normal machine learning algorithms , Hybrid machine learning algorithms are used for fast prediction of heart disease to reduce the risks.
4.	Social Impact / Customer Satisfaction	This enables the doctor to predicts the likelihood of patients getting heart disease. It also helps the doctors in early diagnosis of the disease and prevent the patients from getting into high risk. It can make lifestyle changes to reduce your risk of developing further health problems, such as a heart attack.

5.	Business Model (Revenue Model)	<pre> graph TD     Start([start]) --&gt; Import[(Import Database)]     Import --&gt; Missing{Data Missing?}     Missing -- Yes --&gt; Fill([Fill the missing data])     Fill --&gt; Missing     Missing -- No --&gt; Explore([Data exploration &amp; Data visuliazation])     Explore --&gt; Analyze([Analyze the dataset])     Analyze --&gt; Train([Train data])     Analyze --&gt; Test([Test data])     Train --&gt; Hybrid([Hybrid machine learning model])     Hybrid --&gt; Proposed([Proposed model])     Test --&gt; Proposed     Proposed --&gt; Check([Check Accuracy Score])     Check --&gt; End([end])   </pre>
6.	Scalability of the Solution	<p>The target of this model is to prevent heart disease by earlier prediction. Scalability of this model is only to small extent since there are more patients suffering with other symptoms that can't be recorded. Once the symptom is identified, patients has to consult the doctor immediately.</p>