PROPOSED SOLUTION

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S.No	Parameter	Description
1.	**Problem Statement(Problem to be solved)**	**VISUALIZING AND PREDICTING HEART DISEASE WITH AN INTERACTIVE DASHBOARD** The largest problem in medicine is predicting and identifying heart disease. Due to the lack of doctors and diagnostic tools that affect the treatment of cardiac patients, the diagnosis and treatment processes are currently quite difficult. On the basis of a patient's medical history, an expert's symptom analysis report, and physical laboratory results, invasive procedures are used to identify cardiac problems. Furthermore, because of human intervention, it delays and results in inaccurate diagnosis. At the moment of assessment, it is time-consuming, computationally demanding, and expensive. Based on a variety of symptoms, including age, gender, pulse rate, physical examination, symptoms and signs of the patient, etc., heart disease can be anticipated.

2.	**Idea/ Solution Description**	The main idea of our project is to use classification and regression techniques in supervised learning in Machine learning. Where supervised learning models can be a valuable solution for eliminating manual classification work and for making future predictions based on labeled data. However, formatting your machine learning algorithms requires human knowledge and expertise to avoid overfitting data models. With this, predicting heart disease is much more efficient and accurate.
3.	**Novelty/ Uniqueness**	The basic workflow and the uniqueness here is collection and selection of different heart disease datasets in order to train various machine learning algorithms. Comparison of various data mining algorithms accuracy and performance in predicting heart disease. Storing of doctor and patient information following registration of patients and doctors through the application in cloud based server for analysis.
4.	**Social Impact/ Customer Satisfaction**	The primary goal of this project is to get to know a patient's health situation more accurately. Heart diseases are often complex cases that have many unanswered questions within itself. These questions can be answered by finding relevant patterns and hidden knowledge from various patient histories. These datasets may contain various types of data. These raw datasets are first cleaned and standardized and then processed to extract the necessary information, which will further help the professionals to handle the patient's treatment in an efficient manner.
5.	**Business Model(Revenue Model)**	The dataset is first cleaned and a series of pre-processing steps are undertaken. Then the data is split into 2 datasets namely train and test

		dataset. This train dataset is further split into various divisions and each division is trained under a different algorithm and different models are built. Then the test data set are tested under these newly built models and the prediction results are measured for accuracy. These steps are repeated until we get the best possible accuracy. Then these are loaded with a dashboard that makes the model interactive with the user.
6.	**Scalability of the Solution**	• Decreased mortality • Reduced time consumption • Accurate predictions • Earlier diagnosis • Regular check on healthcare vitals • Extended analysis on risk factors • Visual representation of healthcare data