# PROPOSED SOLUTION

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| S.No | Parameter | Description |
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| 1. | Problem Statement (Problem to be solved) | **Visualizing and Predicting Heart Diseases with an Interactive Dashboard**<br><br>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. It is defined by its use of labeled datasets to train algorithms that to classify data or predict outcomes accurately. The result of the data analysis to identify the necessary patterns for predicting heart diseases. |
| 3. | Novelty / Uniqueness | The proposed system gets inputs directly from the user |

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| | | for parameters such as age, BP level, cholesterol level, smoker history,heart rate etc. These inputs can be tracked by them daily using smart devices. The supervised Machine Learning algorithms are used for learning relationships among input parameters, answer complex queries, better accuracy and provide optimal solution. |
| 4. | Social Impact / Customer Satisfaction | The provision of high-quality services at reasonable prices is a significant problem for healthcare institutions, including hospitals and medical facilities. The provision of high-quality care necessitates accurate patient diagnosis and efficient treatment delivery. Both numerical and categorical data are present in the heart disease database that is accessible. These entries are cleaned and filtered to remove any extraneous data from the database before being subjected to further processing. Complex questions for heart disease diagnosis can be answered by extracting hidden knowledge, i.e., patterns and relationships related to heart illness, from a historical heart disease database. As a result, it may aid medical professionals in making wise clinical judgments. |
| 5. | Business Model (Revenue Model) |  |
| 6. | Scalability of the Solution | Reduced Cost<br>Reduce time management complexity of doctors<br>Faster and accurate prediction virtually<br>Decrease Mortality rate<br>Reduce risk of critical factors<br>Analyze in-depth focus on anticipated risks |

| | | The solution can be used across multiple institutions as long as the candidates show some similarity to the records of the processed dataset. Heart disease prediction tools lead to unwanted biases, errors and excessive medical costs which affects the quality of service provided to patients. |