Project Design Phase-I
Proposed Solution Template

Date	1 November 2023
Team ID	PNT2022TMID592399
Project Name	Project – Disease Prediction using Machine Learning
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)	In the field of healthcare, there is a pressing need to develop a reliable solution for the early prediction and detection of disease in patients. Diseases can be significant health concern with a high incidence rate and severe health implications if not diagnosed and treated early. Currently, diagnosis is primarily based on traditional clinical and laboratory methods, which may result in delayed or missed diagnoses, leading to adverse patient outcomes.
2.	Idea / Solution description	The primary objective is to create a predictive model that accurately assesses an individual's risk of developing a disease using machine learning techniques, incorporating a range of health indicators. The Disease Prediction System is an innovative machine learning solution designed for the detection of 42 diseases when given symptoms as input, enhancing the potential for timely intervention and improved patient outcomes. This system utilizes a diverse set of health-related features to predict the likelihood of disease development, providing users with valuable insights and actionable recommendations.
3.	Novelty / Uniqueness	The uniqueness of this model lies in its commitment to offering a comprehensive, user-centric, and engaging approach to healthcare and well-being, differentiating it from traditional disease prediction models. **Real-time Symptom Assessment:** **Health Data Visualization:** The use of data visualization tools within the platform offers an innovative way for users to comprehend their health data and predictions in a visually engaging manner. **Personalized Action Plans:** The model's capacity to offer personalized action plans based on health assessments, tailored to individual users' needs and goals, enhances its

		uniqueness. Features like this distinguish them from the rest, making the model unique.
4.	Social Impact / Customer Satisfaction	**Save lives:** By identifying people who are at high risk of developing a particular disease, machine learning can help to improve the early diagnosis and treatment of that disease. This can lead to better outcomes for patients and save lives.
5.	Business Model (Revenue Model)	**Reduced costs:** Disease prediction using machine learning can help pharmaceutical companies, medical device companies, and other healthcare providers to reduce costs by improving the efficiency of their operations. For example, machine learning can be used to reduce the time it takes to develop new drugs and to improve the accuracy of medical diagnoses.
6.	Scalability of the Solution	**Cost Efficiency:** Businesses in the healthcare sector can benefit from reduced costs through improved operational efficiency. **Scalability** via real-time data updates, user customization, and advanced visualization techniques, making it easy for users to track their health status.