Project Design Phase-I
Proposed Solution Template

PADALA NAVYANTH REDDY
PULAGAM SYAM KRISHNA REDDY
PADALA SANTHOSH REDDY
KARRI RAMA KRISHNA REDDY

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)	Develop a machine learning model that can predict an individual's risk of having diabetes (Diabetes) based on their health-related features and demographic information.
2.	Idea / Solution description	The proposed solution involves developing and training machine learning models and CNN to predict the likelihood of an individual developing diabetes based on input features such as age, BMI, glucose levels, and other relevant health indicators. These models will be trained on a large dataset of historical patient data to learn patterns and make accurate predictions. The solution aims to provide a reliable and non-invasive method for early diabetes detection.
3.	Novelty / Uniqueness	The novelty of this project lies in the integration of machine learning models and CNN specifically tailored for diabetes prediction. While there have been previous attempts at predicting diabetes using machine learning, the inclusion of CNN adds a unique aspect by allowing the model to learn spatial features from medical images or other visual data related to diabetes screening (if available). This integration of different techniques can potentially enhance the accuracy and reliability of the prediction.
4.	Social Impact / Customer Satisfaction	The social impact of this project is significant as it can help in early detection and prevention of diabetes-related complications. By accurately predicting diabetes, individuals at risk can receive timely interventions, adopt healthier

		lifestyle choices, and undergo necessary medical treatments. This can potentially improve their quality of life, reduce healthcare costs, and prevent severe health consequences. Customer satisfaction is also important as the solution will provide a convenient and accessible tool for individuals to assess their risk of developing diabetes.
5.	Business Model (Revenue Model)	The business model can be structured around multiple revenue streams. Some potential revenue sources include: ➔ Licensing the predictive model to healthcare organizations and hospitals for implementation in their existing systems. ➔ Offering the prediction system as a subscription-based service for individual users, healthcare professionals, or insurance companies. ➔ Collaborating with pharmaceutical companies to incorporate the prediction system into their diabetes management platforms. ➔ Providing data analysis and predictive modeling services to research institutions and pharmaceutical companies involved in diabetes-related studies.
6.	Scalability of the Solution	The solution has great potential for scalability. With advancements in technology and the availability of larger datasets, the ML models and CNN can be continuously improved to enhance their predictive capabilities. Additionally, the system can be easily expanded to accommodate additional health parameters, incorporate new research findings, and integrate with emerging technologies such as wearable devices or telemedicine platforms. This scalability enables the solution to keep evolving and adapting to ongoing advancements in the field of diabetes diagnosis and management.