Project Design Phase-II
Proposed Solution Template

Date	27 October 2023
Team ID	591-581
Project Name	Travel Insurance Prediction
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)	Travel insurance is very important, it's like a safety net for unexpected events during your journey, covering things like medical emergencies, lost luggage, or flight cancellations. As global travel increases, so does the need for affordable and thorough coverage. To make the process smarter, we're using a predictive model that analyzes data on past travel insurance purchases, customer info, and travel plans. This model aims to predict if someone will buy travel insurance by looking at factors like age, income, and family size. The goal is to create a tool that accurately forecasts who's likely to get travel insurance based on these details.
2.	Idea / Solution description	Our proposed approach involves the development of a predictive model utilizing various machine learning algorithms to ascertain the likelihood of an individual opting for travel insurance. The predictive factors considered encompass several key conditions, • Including the individual's age • Employment status • Educational attainment • Annual income • Family size • Presence of chronic diseases • Inclination towards travel • Previous international travel experience. It is noteworthy that, among the array of machine learning algorithms, the Gradient Boosting technique has demonstrated notable efficacy in optimizing the predictive accuracy of the model.

3.	Novelty / Uniqueness	The special thing about using Gradient Booster in our project is that it's like having a smart helper. It's really good at learning from past information and figuring out patterns. So, when we feed it data about people's age, job, education, income, family, health, travel interests, and past trips abroad, it becomes super smart in predicting whether they'll get travel insurance or not. It's like having a clever friend who's really good at guessing based on what they've seen before!
4.	Social Impact / Customer Satisfaction	Implementing a smart system like the Gradient Booster for predicting travel insurance choices can make a positive impact on people's lives. By accurately foreseeing whether someone needs travel insurance, it ensures that individuals get the coverage they require, providing a sense of security during their journeys. This not only enhances customer satisfaction but also promotes a more informed and confident travel experience for everyone.
5.	Business Model (Revenue Model)	The business model for the travel insurance prediction project involves using a smart computer program called Gradient Booster. It's like a helpful assistant that looks at information about people, such as their age, job, education, income, health, travel interests, and past trips abroad. By studying this information, the model figures out if someone is likely to buy travel insurance. This smart tool helps companies understand their customers better and make decisions about offering travel insurance. It's like having a digital friend that makes predictions to help businesses provide the right services to the right people.
6.	Scalability of the Solution	The scalability of our solution using the Gradient Booster algorithm is noteworthy, especially with an accuracy rate of 83%. This means our system can handle a growing amount of data and still make reliable predictions about whether someone will buy travel insurance. The higher accuracy ensures that as more people and details are added to the dataset, our model remains effective in providing trustworthy forecasts. This scalability is crucial for accommodating the increasing complexity and size of data, making our predictive system robust and adaptable to changing scenarios.