

**Project Design Phase-I**  
**Proposed Solution Template**

Date	05 October 2022
Team ID	PNT2022TMID53243
Project Name	<b>Project</b> - Analytics For Hospitals' Health-Care Data
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)	Latest Covid-19 Pandemic has raised worries about one of the most neglected areas of focus: Healthcare Administration. While data science has a variety of applications in healthcare management, patient length of stay is one of the most important parameters to watch and anticipate in order to enhance hospital healthcare management efficiency.
2.	Idea / Solution description	<p>This project intends to calculate the length of stay in a particular hospital</p> <p>The key attributes that will be considered for making the decisions are Department ,Ward Type , Severity of Illness etc</p> <p>For determining the % of acceptance, we will be using various ML models such as Logistic Regression, Multiple Linear Regression, Decision Tree &amp; Random Forest and assess which model gives the highest accuracy with the help of performance metrics like accuracy score, precision and recall.</p>
3.	Novelty / Uniqueness	The web-app will predict the length of stay in a particular hospital . It is beneficial for patients, beneficial for the quality of care they get, and beneficial for the financial health of the institution.
4.	Social Impact / Customer Satisfaction	Extended periods of stay have a detrimental effect on hospitals as well. They contribute to a rise in expenses and are often associated with inefficiency, which is an indication that some procedures may need reevaluation. In a similar vein, the duration of stay has a direct influence on bed management, which in turn reduces

		<p>turnover and affects income. When a patient is held in a bed for a longer period of time than they need, it may mean that the bed is not accessible for another patient who requires it more urgently. This implies that hospitals may not be able to satisfy the demands of their patients.</p> <p>A shorter amount of time spent receiving therapy directly correlates to a shorter overall duration of stay. It is beneficial for patients, beneficial for the quality of care they get, and beneficial for the financial health of the institution.</p>
5.	Business Model (Revenue Model)	<p>1. Advertisements of different hospitals could be placed in the web-app to generate revenue through ads.</p> <p>2. A separate premium plan could be created where the patients and doctors can input certain details and get information about the length of the stay</p>
6.	Scalability of the Solution	<p>A future update could have chat space where Patients , doctors , administration officials of the hospital can interact .</p>