

Project Design Phase-I
Proposed Solution Template

Date	31-10-2023
Team ID	591862
Project Name	Project - IDENTIFYING AIRLINE PASSENGERS' SATISFACTION Using ML
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Create an ML solution to analyse extensive airline passenger data, identifying patterns and factors influencing satisfaction, enabling airlines to make data-driven decisions, enhance services, and elevate overall customer satisfaction levels.
2.	Idea / Solution description	Our solution intends to create an intelligent model to improve passenger satisfaction by employing complex algorithms such as Logistic Regression, Random Forest, Decision Trees, and so on and it also entails putting in place a strong machine learning system to analyse the various factors that influence passenger satisfaction. Airlines can gain deep insights, predict satisfaction levels, and make data-driven decisions by processing diverse data sources.
3.	Novelty / Uniqueness	Our solution goes beyond basic statistical methods by utilizing complex algorithms such as Logistic Regression, Random Forest, and Decision Trees. These algorithms allow the system to recognize intricate patterns in the data, resulting in more accurate predictions and actionable insights. Our system aims to predict passenger satisfaction levels in real time. The ability to make real-time predictions enables airlines to respond quickly to emerging trends and issues, improving customer service on the fly. Our solution not only predicts passenger satisfaction levels, but it also thoroughly

		analyses the various factors that influence passenger satisfaction.
4.	Social Impact / Customer Satisfaction	ML algorithms enable airlines to understand intricate patterns and individual preferences by analysing large data sets. This knowledge enables airlines to tailor services to meet the specific needs and desires of their passengers. As a result, passengers have a more personalized and enjoyable journey, which increases satisfaction and loyalty. Finally, the social impact is found in cultivating a positive relationship between passengers and airlines, where customer satisfaction becomes a driving force, shaping the future of air travel.
5.	Business Model (Revenue Model)	Airlines are charged according to the amount of data processed. Larger airlines with larger datasets pay higher fees, incentivizing them to invest in customer satisfaction optimization. Charge airlines on a per-use basis for add-on services such as sentiment analysis on specific social media campaigns or targeted passenger surveys. Airlines that prefer to host the system internally can license the ML algorithms and software. This method is appropriate for airlines that have stringent data privacy regulations or large IT infrastructures.
6.	Scalability of the Solution	Cloud-based platforms, distributed data processing, real-time analysis, load balancing, scalable databases, and continuous monitoring ensure scalability in the solution for identifying airline passenger satisfaction. These strategies enable the system to handle varying workloads efficiently, ensuring smooth processing of large datasets. The components of the solution can scale independently, optimizing resource usage and improving performance. Continuous monitoring allows for continuous optimization and detection of potential issues, ensuring that the system remains effective as data volumes and user requirements change.