Project Design Phase-I
Proposed Solution Template

Date	21 October 2023
Team ID	592974
Project Name	Airline Review Classification Using ML
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)	Airlines receive thousands of reviews daily across various platforms.A system is required to automatically classify and analyze these reviews, enabling airlines to better address passenger concerns and enhance their service quality.
2.	Idea / Solution description	**Automated Airline Review Analyzer (AARA):** **Data Collection**: Integrate with multiple platforms (like MakeMyTrip, airline's own website, social media) to collect reviews. **Natural Language Processing (NLP)**: Use NLP for sentiment analysis to classify reviews as positive, negative, or neutral. Further, use topic modeling to identify common themes or issues in reviews. **Interactive Dashboard**: Offer an easy-to-use dashboard showing real-time insights, sentiment breakdown, trending issues, etc. **Feedback Mechanism**: Provide an avenue for passengers to validate or correct the system's classification of their reviews.
3.	Novelty / Uniqueness	**Real-time Issue Tagging**: Besides general sentiment, identify specific actionable issues in real-time (e.g., 'luggage handling', 'in-flight meals'). **Adaptive Learning**: The system learns from user corrections, constantly refining its accuracy. **Multilingual Support**: Can analyze reviews in multiple languages, crucial for global airlines.

4.	Social Impact / Customer Satisfaction	**Enhanced Responsiveness**: Airlines can respond faster to prevalent issues, leading to better service quality. **Trust Building**: Demonstrates to passengers that their feedback is valued and acted upon. **Tailored Services**: By understanding common desires and complaints, airlines can tailor their services to better meet passenger expectations.
5.	Business Model (Revenue Model)	**Subscription Model**: Airlines pay a monthly or yearly subscription fee for accessing the system and its updates. **Tiered Services**: Offer basic sentiment analysis in the base package, with advanced features like multilingual support, integration with more platforms, or advanced analytics as premium features. **Consultancy and Training**: Offer additional services where data scientists work with airlines to interpret data, train their staff in using insights, or even in creating tailored solutions based on their specific needs.
6.	Scalability of the Solution	**Cloud Deployment**: Deploying on the cloud ensures that the system can handle vast amounts of data from airlines of all sizes, from regional carriers to international giants. **Integration Capabilities**: Design the system to easily integrate with new platforms or databases, ensuring it remains relevant as new review platforms emerge or as airlines change their operational tools. **Expand to Related Industries**: The core of the system, sentiment analysis, and topic modeling, can be tailored for related industries like hotels, cruises, or even train services.