Project Design Phase-I

Proposed Solution

S.NO	Parameter	Description
1	Problem Statement	In today's interconnected world, the airline industry serves as a critical component for global travel and business. Airline companies face the challenge of efficiently analysing and understanding the Diverse sentiments expressed by customers in their reviews. Traditional methods like getting large volume of feedback from various sources such as social media, review platforms and surveys makes it difficult to manually process and extract meaningful insights.
2	Idea/ Solution description	To address this problem, a machine learning-based web application can be developed to automate the sentiment analysis of airline reviews. By using Classification models such as Decision Tree Classifier, Random Forest Classifier, XGBoost Classifier etc., the web app will classify customer reviews into positive, negative, or neutral categories.
3	Novelty/Uniqueness	• Multi-Model approach The project employs multiple classification models rather than relying on a single algorithm. • Feature Selection Considerations: Project recognizes the critical role of relevant features in training classification models. By addressing feature selection, the project enhances the accuracy.
4	Social Impact / Customer Satisfaction	By accurately classifying and analysing airline reviews, the project contributes to improved customer satisfaction. The web application's ability to correctly analyse and categorize customer feedback enables airlines to identify and address issues in near real-time.

5	Business Model (Revenue Model)	1) Offer solutions and additional features based on the specific needs of individual airlines. 2) Provide a API for seamless integration of the sentiment analysis service into the airline's existing systems. Charge a fee for API access
6	Scalability of the Solution	Implement parallel techniques to distribute the workload across multiple processing units. Ensure that the sentiment analysis algorithms are optimized for performance.