Project Design Phase-I
Proposed Solution Template

Date	13 October 2022
Team ID	PNT2022TMID52214
Project Name	Developing A Flight Delay Prediction Model Using Machine Learning
Maximum Marks	2 Marks

Proposed Solution Template:

The following information in the proposed solution template.

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Flight delays are gradually increasing and bring more financial difficulties and customer dissatisfaction to airline companies. To resolve this situation, supervised machine learning models were implemented to predict flight delays.
2.	Idea / Solution description	Using a machine learning model, we can predict flight arrival delays. The input to our algorithm is rows of feature vectors like departure date, departure delay ,day ,month ,year and date distance between the two airports, scheduled arrival time and the flight. Flight departure prediction is used to predict the specific departure time of the flight. By screening the factors closely related to the flight departure, the regression prediction of the actual flight departure from the planned

		departure time is carried out.
3.	Novelty / Uniqueness	Machine learning was built using the model which utilizes features that are readily available before the departure of an airplane and can inform passengers and airlines about flight delays in advance, helping them reduce possible monetary losses.

4.	Social Impact / Customer Satisfaction	Flight delays not only irritate air passengers and disrupt their schedules but also cause a decrease in efficiency, an increase in capital costs, reallocation of flight crews and aircraft, and additional crew expenses
5.	Business Model (Revenue Model)	Airlines face is that the vital prices that are related to flights being delayed because of natural occurrences and operational shortcomings that is an upscale affair for the airlines, making issues in scheduling and operations for the end users therefore inflicting unhealthy name and client disco ntent. As we all know that we have tendency to not get the flight delay before departure as customers of the Airline Neither the airline company's ground staff gets the airline delay prediction supported varied conditions.

| 6. | Scalability of the Solution | The arrival delay distribution, compared with the departure delay distribution, leans toward left. The scheduled time of an event defines a flight delay compared to the actual time of the event. Airlines usually put extra buffer time on a flight to ensure on-time arrival.Therefore, the departure delay and arrival delay distributions difference indicate that some departure delays were recovered during the flights due to the extra amount of time embedded in the flight time between two airports. |