Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID00517
Project Name	Project – Flight Delay Prediction
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)	Over the last twenty years, air travel has been increasingly preferred among travelers,mainly because of its speed and in some cases comfort. This has led to phenomenal growth in air traffic and on the ground. An increase in air traffic growth has also resulted in massive levels of aircraft delays on the ground and in the air. These delays are responsible for large economic and environmental losses. The main objective of the model is to predict flight delays accurately in order to optimize flight operations and minimize 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 vector like departure date, departure delay, distance between the two airports, scheduled arrival time etc. We then use decision tree classifier to predict if the flight arrival will be delayed or not. A flight is considered to be delayed when difference between scheduled and actual arrival times is greater than 15 minutes. Furthermore, we compare decision tree classifier with logistic regression and a simple neural network for various figures of merit.
3.	Novelty / Uniqueness	✦ ML based flight delay prediction. ✦ Artificial Intelligence

4.	Social Impact / Customer Satisfaction	This saves a lot of time for passengers. Immediate and planned actions always have their own set of benefits like preventing unnecessary confusion and delay.
5.	Business Model (Revenue Model)	Subscription and advertising model
6.	Scalability of the Solution	It allows passengers to be aware of their flight delays (due to various reasons) ahead of time instead of having to wait for hours.