

Project Design Phase-I
Proposed Solution

Date	24 September 2022
Team ID	PNT2022TMID11613
Project Name	Flight Delay Prediction Using Machine Learning
Maximum Marks	2 Marks

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	As there are a lot of factors via which the flight are getting delayed, this delay can cost the customer's time and money a lot. The customer need to find a place to stay, as this was unplanned the rates of booking for the hotels may cost more, or he may also want to find other models or transportation, but compared to flights no other transports are faster. Imagine the same scenario for 100 to 300 people, that will be a nightmare, therefore we are developing a model that can predict the arrival of the flights
2.	Idea / Solution description	Using machine learning model, we can predict flight arrival delays. The input to our algorithm are rows of features 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	We will be implementing a classification algorithm, whether the user can wait for the flight or cancel it go for the next one. The inputs will be, ETA of the user, budget he can allocate and some other factors on demand.
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> • Time management • Trip management can be easy • Cost effective • Social impact
5.	Business Model (Revenue Model)	Generate revenue via good ads able to get a commission if we refer the details of the customer to other company on demand of the customer.

6.	Scalability of the Solution	Can even add the flight booking system also or refer to some authorised agents. Using the IBM cloud the systems can withstand the user loads, so that addition of any new features will not be that difficult.
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