

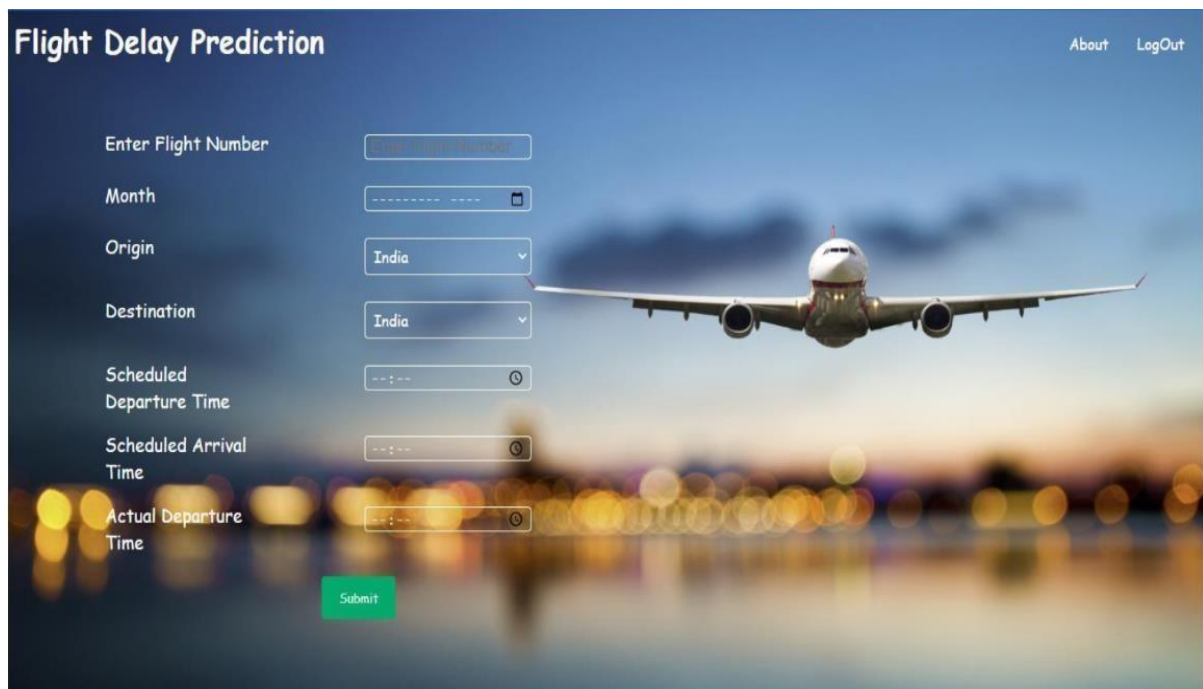
# PROJECT DEVELOPMENT PHASE

## SPRINT 2

### TEST CASE

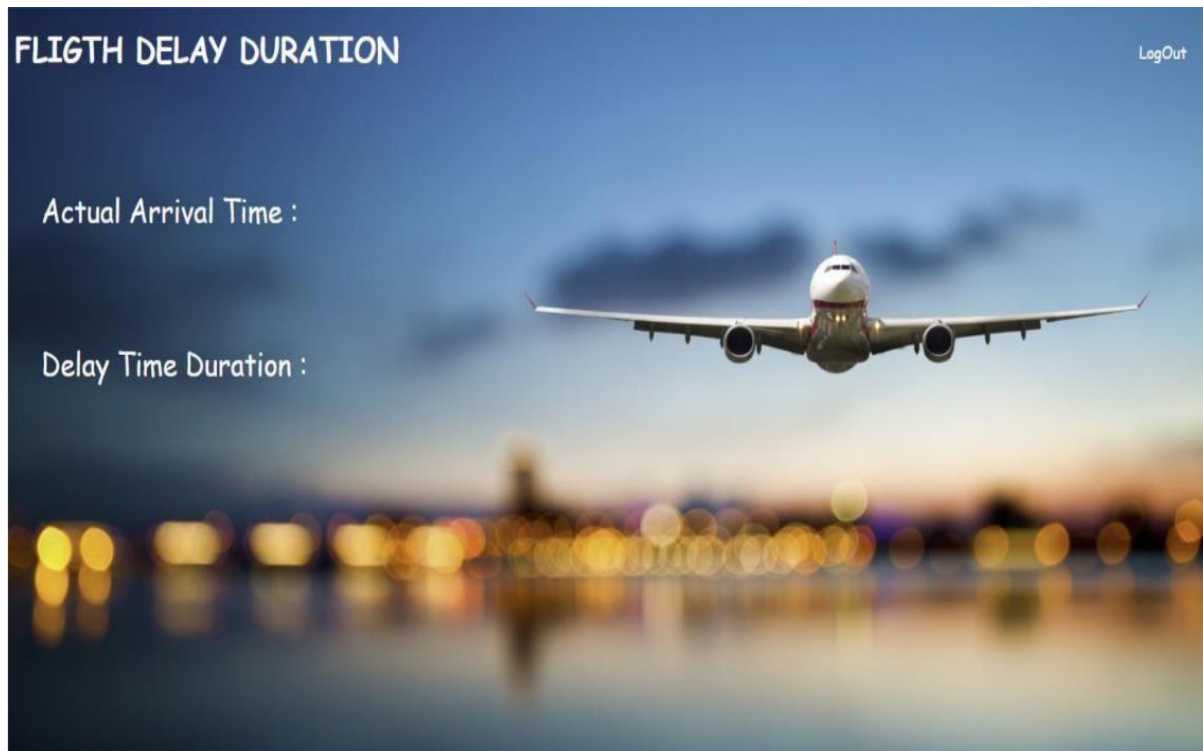
DATE	07 NOVEMBER 2022
TEAM ID	PNT2022TMID37095
PROJECT NAME	DEVELOPING A FLIGHT DELAY PREDICTION MODEL USING MACHINE LEARNING
MAXIMUM MARKS	8 MARKS

### HOME PAGE:



The screenshot shows the home page of a web application titled "Flight Delay Prediction". The page has a dark blue header with the title on the left and "About" and "LogOut" links on the right. The main content area features a form with the following fields: "Enter Flight Number" (text input), "Month" (calendar icon), "Origin" (dropdown menu showing "India"), "Destination" (dropdown menu showing "India"), "Scheduled Departure Time" (time picker), "Scheduled Arrival Time" (time picker), and "Actual Departure Time" (time picker). A green "Submit" button is located at the bottom of the form. The background of the page is a blurred image of an airplane flying over a city at night with bokeh lights.

## RESULT PAGE:



## ABOUT PAGE:

# FLIGHT DELAY DURATION

LogOut

## Developing A Flight Delay Prediction Model Using Machine Learning

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. 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.

