

## Project Development Phase

### Sprint 2

Date	05 November 2022
Team ID	PNT2022TMID30209
Project Name	DEVELOPING A FLIGHT DELAY PREDICTION MODEL USING MACHINE LEARNING

### Analysis and Prediction:

## Data Analysis

```
data.info()
```

Output exceeds the [size limit](#). Open the full output [data\\_in a text editor](#)

```
<class 'pandas.core.frame.DataFrame'>  
RangeIndex: 11231 entries, 0 to 11230  
Data columns (total 25 columns):  
#   Column                Non-Null Count  Dtype  
---  ---  
0   YEAR                  11231 non-null  int64  
1   QUARTER               11231 non-null  int64  
2   MONTH                11231 non-null  int64  
3   DAY_OF_MONTH         11231 non-null  int64  
4   DAY_OF_WEEK          11231 non-null  int64  
5   UNIQUE_CARRIER      11231 non-null  object  
6   TAIL_NUM              11231 non-null  object  
7   FL_NUM               11231 non-null  int64  
8   ORIGIN_AIRPORT_ID     11231 non-null  int64  
9   ORIGIN                11231 non-null  object  
10  DEST_AIRPORT_ID       11231 non-null  int64  
11  DEST                 11231 non-null  object
```

# Handling Missing Values

```
data.isnull().sum()
```

5]

```
YEAR          0
QUARTER        0
MONTH          0
DAY_OF_MONTH   0
DAY_OF_WEEK    0
UNIQUE_CARRIER 0
TAIL_NUM       0
FL_NUM         0
ORIGIN_AIRPORT_ID 0
ORIGIN         0
DEST_AIRPORT_ID 0
DEST          0
CRS_DEP_TIME   0
DEP_TIME       107
DEP_DELAY      107
DEP_DELAY_15   107
```

```
pred_test = lor.predict(x_test)
pred_test
```

```
array([0, 0, 0, ..., 0, 0, 0], dtype=int64)
```

```
accuracy_score(pred_test, y_test)
```

0.9928793947485536

```
<tr>
  <td>Origin</td>
  <td><input type="text" class="input-box" placeholder="Origin" name = "origin" required></td>
</tr>
<tr>
  <td>Destination</td>
  <td><input type="text" class="input-box" placeholder="Destination" name = "destination" required></td>
</tr>
<tr>
  <td>Scheduled Departure Time</td>
  <td><input type="time" class="input-box" placeholder="Scheduled Departure Time" name = "dept" required></td>
</tr>
<tr>
  <td>Scheduled Arrival Time</td>
  <td><input type="time" class="input-box" placeholder="Scheduled Arrival Time" name = "arrtime" required></td>
</tr>
<tr>
  <td>Actual Departure Time</td>
  <td><input type="time" class="input-box" placeholder="Actual Departure Time" name = "actdept" required></td>
</tr>
</table>
<button type="submit" class="submit-btn" >SUBMIT</button>
</form>
</div>
</div>
</>
```

```

<body>
  <div class="container">
    <div class="card">
      <div class="inner-box">
        <div class="card-front">
          <form action="/register" method="POST">
            <table>
              <tr>
                <td>Enter the Flight Number</td>
                <td><input type="flight number" class="input-box" placeholder="Flight Number" name = "name" req
              </tr>
              <tr>
                <td>Month and Year</td>
                <td><input type="Month" class="input-box" placeholder="Month" name = "month" required></td>
              </tr>
              <tr>
                <td>Day of Month</td>
                <td><input type="number" class="input-box" placeholder="Day of Month" name = "day_of_month" req
              </tr>
              <tr>
                <td>Day of Week</td>
                <td><input type="number" class="input-box" placeholder="Day of Week" name = "day_of_week" requi
              </tr>
            </table>
          </form>
        </div>
      </div>
    </div>
  </div>
</body>

```

## OUTPUT:

Enter the Flight Number

Flight Number

Month and Year

-----

Day of Month

Day of Month

Day of Week

Day of Week

Origin

Origin

Destination

Destination

Scheduled Departure Time

--:-- --

Scheduled Arrival Time


--:-- --

Actual Departure Time

--:-- --

EN

SUBMIT

A white model of a four-engine airplane, likely a Boeing 747, is shown from a top-down perspective. The aircraft is white with a blue stripe along the fuselage and a blue tail fin. It is positioned on a solid blue background, casting a soft shadow to its left.