PROJECT DEVELOPMENT PHASE

Sprint – IV Code and Test cases

Date	13-Nov-2022
Team ID	PNT2022TMID10242
Project Name	Developing a Flight Delay Model UsingMachine Learning
Maximum Marks	8 Marks

Integration the Deployed Model with Flask

Web Application using IBM Cloud

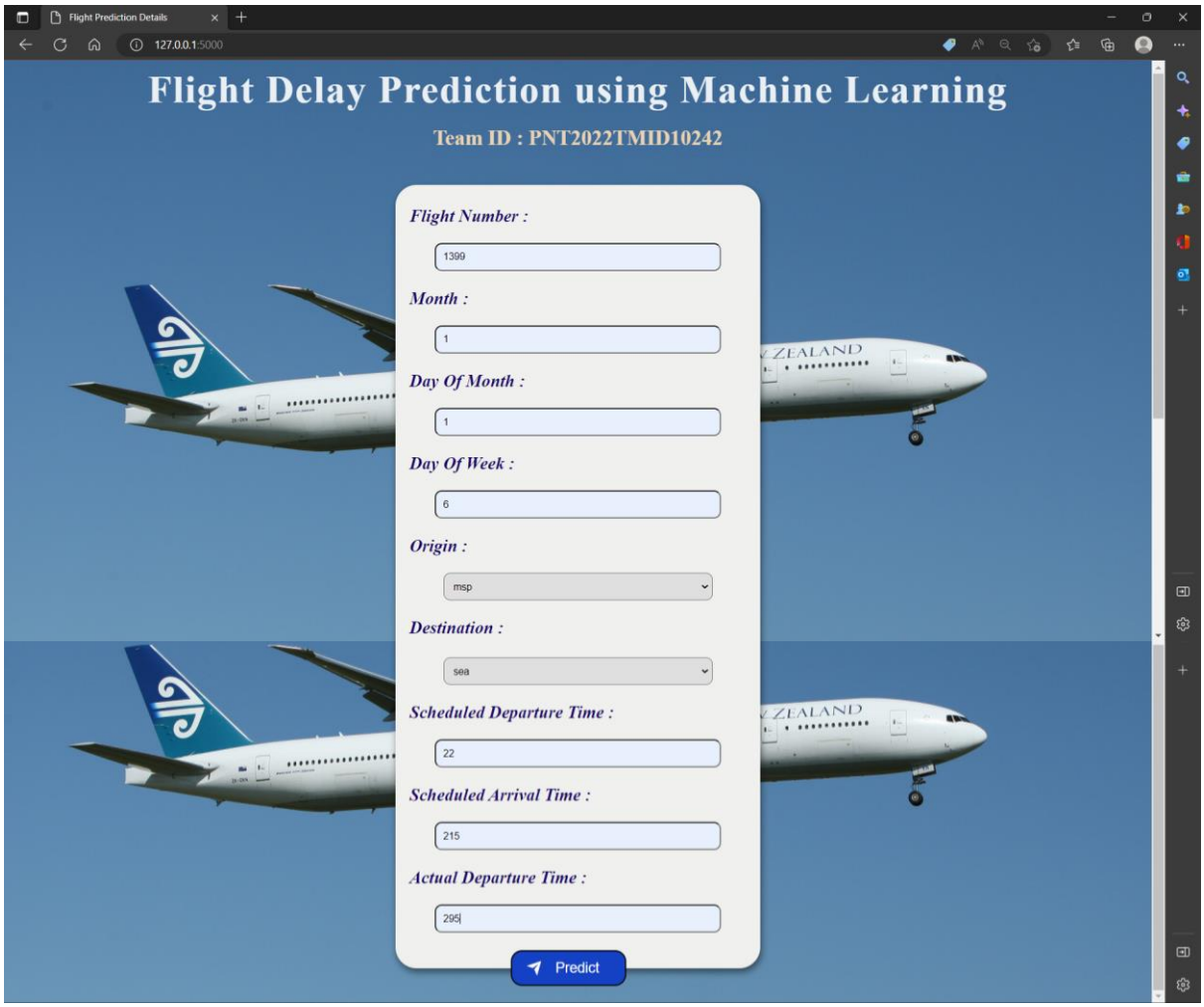
App_ibm.py :

```
from flask import Flask,request, render_template
import numpy as np
import pandas as pd
import pickle
import os
import requests

# NOTE: you must manually set API_KEY below using information retrieved from
your IBM Cloud account.
API_KEY = "AWv4Z34VAxntuqgtpdvJ736I-SLwbK0StVIE3RxBrAPK"
token_response = requests.post('https://iam.cloud.ibm.com/identity/token',
data={"apikey": API_KEY, "grant_type": 'urn:ibm:params:oauth:grant-
type:apikey'})
mltoken = token_response.json()["access_token"]

header = {'Content-Type': 'application/json', 'Authorization': 'Bearer ' +
mltoken}


app=Flask(__name__)
@app.route('/')
def home():
```

```
    return render_template('index2.html')

@app.route('/predicts', methods=['POST','GET'])
def predict():
    name=request.form['name']
    month=request.form['month']
    dayofmonth=request.form['dayofmonth']
    dayofweek=request.form['dayofweek']
    origin=request.form['origin']
    if(origin=="msp"):
        origin1,origin2,origin3,origin4,origin5=0,0,0,0,1
    if(origin=="dtw"):
        origin1,origin2,origin3,origin4,origin5=1,0,0,0,0
    if(origin=="jfk"):
        origin1,origin2,origin3,origin4,origin5=0,0,1,0,0
    if(origin=="sea"):
        origin1,origin2,origin3,origin4,origin5=0,1,0,0,0
    if(origin=="alt"):
        origin1,origin2,origin3,origin4,origin5=0,0,0,1,0


    destination=request.form['destination']
    if(destination=="msp"):
        destination1,destination2,destination3,destination4,destination5=0,0,0
,0,1
    if(destination=="dtw"):
        destination1,destination2,destination3,destination4,destination5=1,0,0
,0,0
    if(destination=="jfk"):
        destination1,destination2,destination3,destination4,destination5=0,0,1
,0,0
    if(destination=="sea"):
        destination1,destination2,destination3,destination4,destination5=0,1,0
,0,0
    if(destination=="atl"):
        destination1,destination2,destination3,destination4,destination5=0,0,0
,1,0

    dept=request.form['dept']
    arrtime=request.form['arrtime']
    actdept=request.form['actdept']
    dept15 = int(dept) - int(actdept)
    total=[[name,month,dayofmonth,dayofweek,origin1,origin2,origin3,origin4,or
igin5,destination1,destination2,destination3,destination4,destination5,dept,ar
rtime]]
    # y_pred=model.predict(total)
    # print(y_pred)
```

```
    payload_scoring = {"input_data": [{"field":
[['name','month','dayofmonth','dayofweek','origin1','origin2','origin3','origi
n4','origin5','destination1','destination2','destination3','destination4','des
tination5','dept','arrtime']], "values": total}]}
    response_scoring = requests.post('https://us-
south.ml.cloud.ibm.com/ml/v4/deployments/a7a269f3-d3c1-4e2d-85b2-
47e1bf6bbfee/predictions?version=2022-10-13', json=payload_scoring,
headers={'Authorization': 'Bearer ' + mltoken})
    print(response_scoring)
    predictions = response_scoring.json()
    output = predictions['predictions'][0]['values'][0][0]
    print(output)



    if(output ==[0.]):
        ans="The Flight will be on time"
    else:
        ans="The Flight will be Delayed"



    return render_template("predict.html",showcase=ans)



if __name__=='__main__':
    app.run(debug = True)
```

Search web page :



Result web page :