SPRINT-4 PROJECT DOCOMENT

Team ID	PNT2022TMID44333
Project Name	Developing a Flight Delay Prediction Model Using Machine Learning

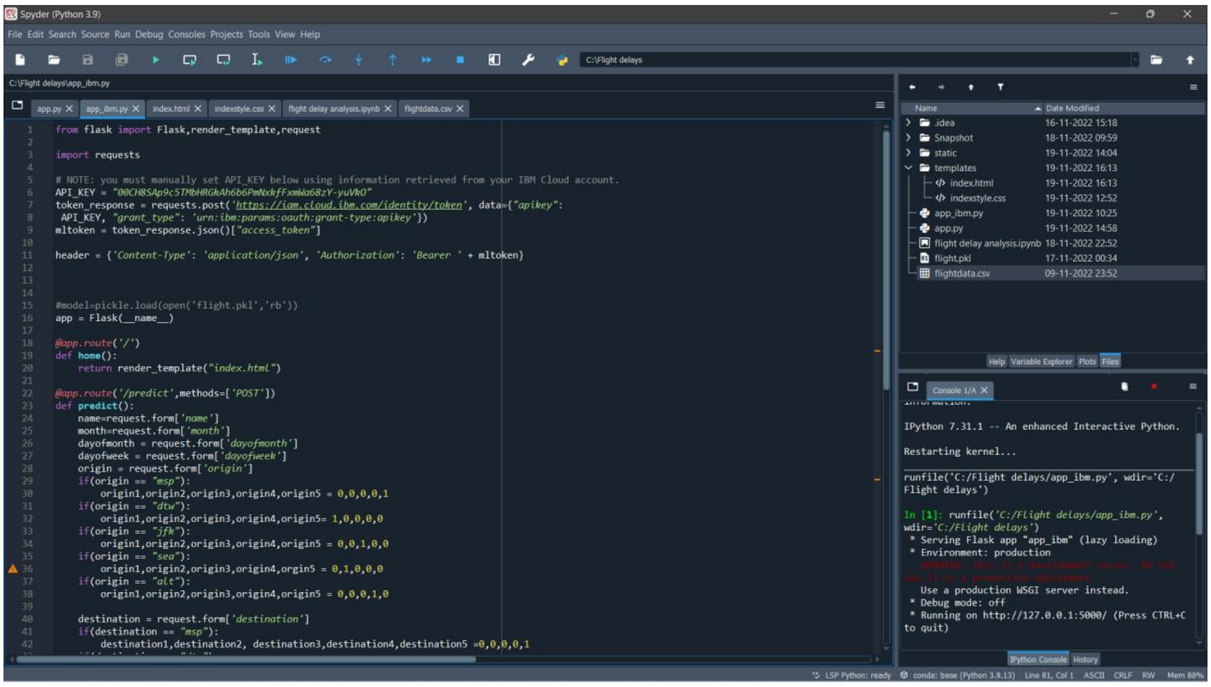
Sprint-4 Development Phase:

Outline:

Hosting the IBM cloud Flask on the Model

Execute and Test the ML Model.

Hosting the IBM cloud Flask:



```
from flask import Flask,render_template,request

import requests

# NOTE: you must manually set API_KEY below using information retrieved from your IBM Cloud account.
API_KEY = "00CH8SAp9c5TMbHRGkAh6b6PmNxkfFxmWa68zY-yuVkO"
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}



#model=pickle.load(open('flight.pkl','rb'))
app = Flask(__name__)

@app.route('/')
def home():
    return render_template("index.html")

@app.route('/predict',methods=['POST'])
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,orgin5 = 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
```

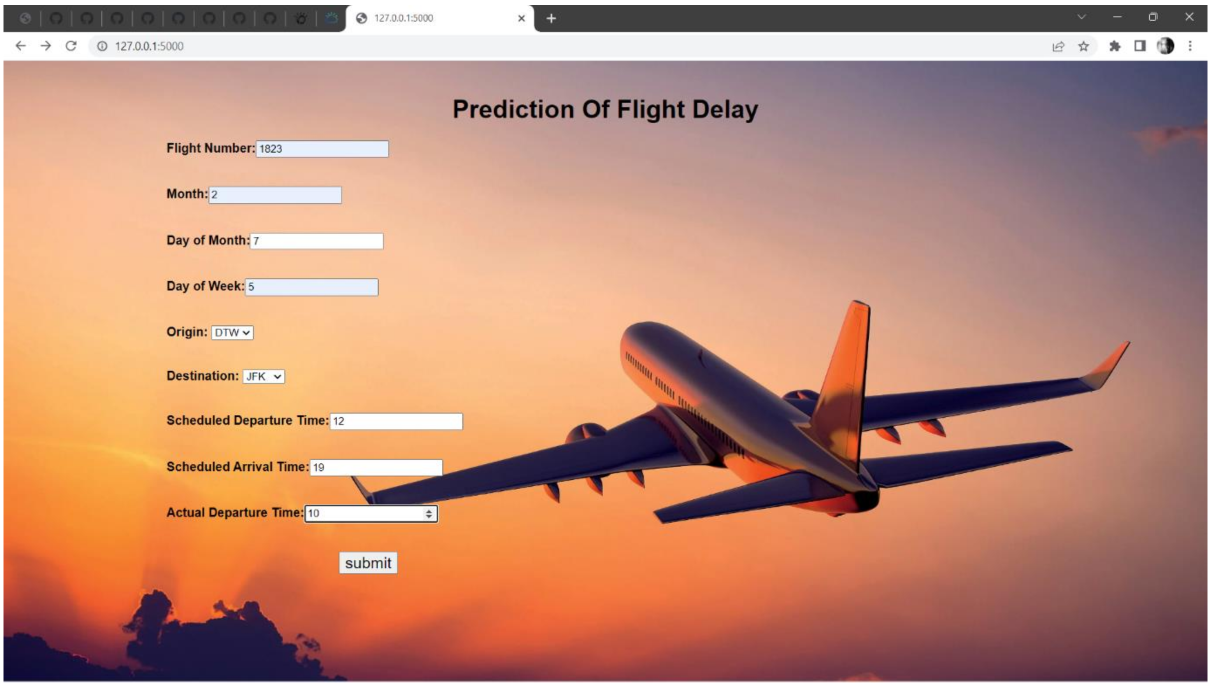
Name	Date Modified
.idea	16-11-2022 15:18
Snapshot	18-11-2022 09:59
static	19-11-2022 14:04
templates	19-11-2022 16:13
index.html	19-11-2022 16:13
indexstyle.css	19-11-2022 12:52
app_ibm.py	19-11-2022 10:25
app.py	19-11-2022 14:58
flight delay analysis.ipynb	18-11-2022 22:52
flight.pkl	17-11-2022 00:34
flightdata.csv	09-11-2022 23:52

```
IPython 7.31.1 -- An enhanced Interactive Python.

Restarting kernel...

runfile('C:/Flight delays/app_ibm.py', wdir='C:/
Flight delays')

In [1]: runfile('C:/Flight delays/app_ibm.py',
wdir='C:/Flight delays')
 * Serving Flask app "app_ibm" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not
use it in a production deployment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://127.0.0.1:5000/ (Press CTRL+C
to quit)
```

```
LSP Python: ready   conda: base (Python 3.9.13)   Line 81, Col 1   ASCII   CRLF   RW   Mem 88%
```

Execute and Test the Model:

While Entering the Values that Flight will be on time.



127.0.0.1:5000

Prediction Of Flight Delay

Flight Number: 1823

Month: 2

Day of Month: 7

Day of Week: 5

Origin: DTW

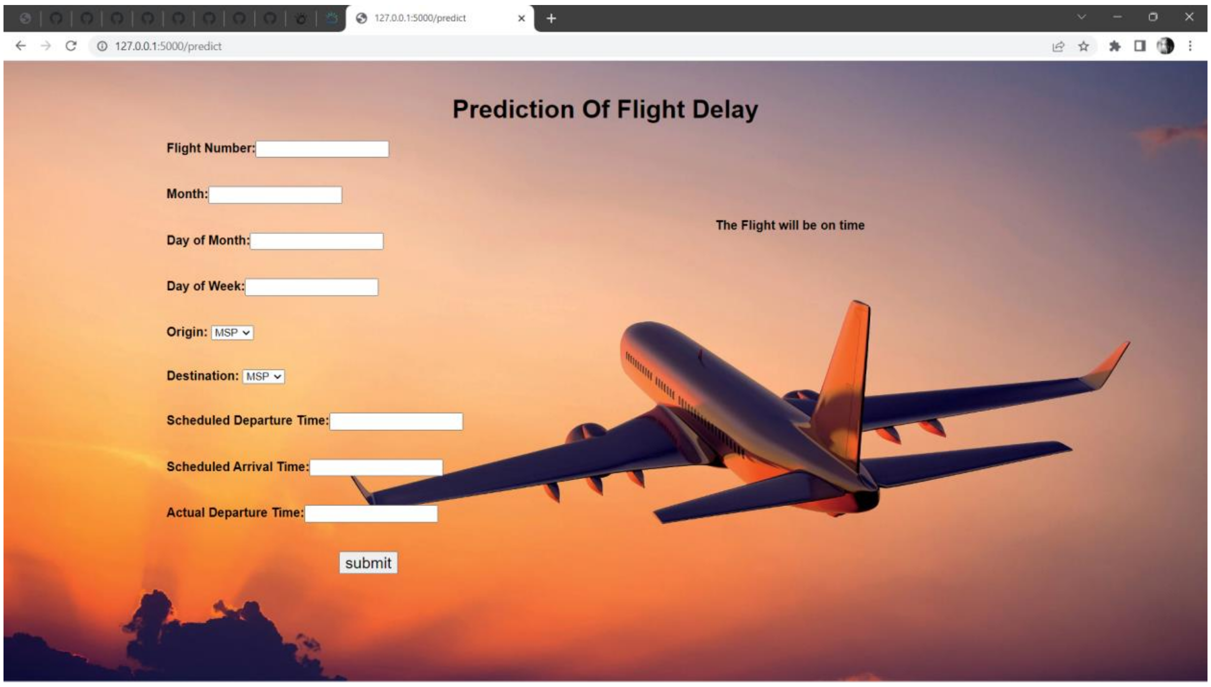
Destination: JFK

Scheduled Departure Time: 12

Scheduled Arrival Time: 19

Actual Departure Time: 10

Output:



127.0.0.1:5000/predict

Prediction Of Flight Delay

Flight Number:

Month:

Day of Month:

Day of Week:

Origin: MSP

Destination: MSP

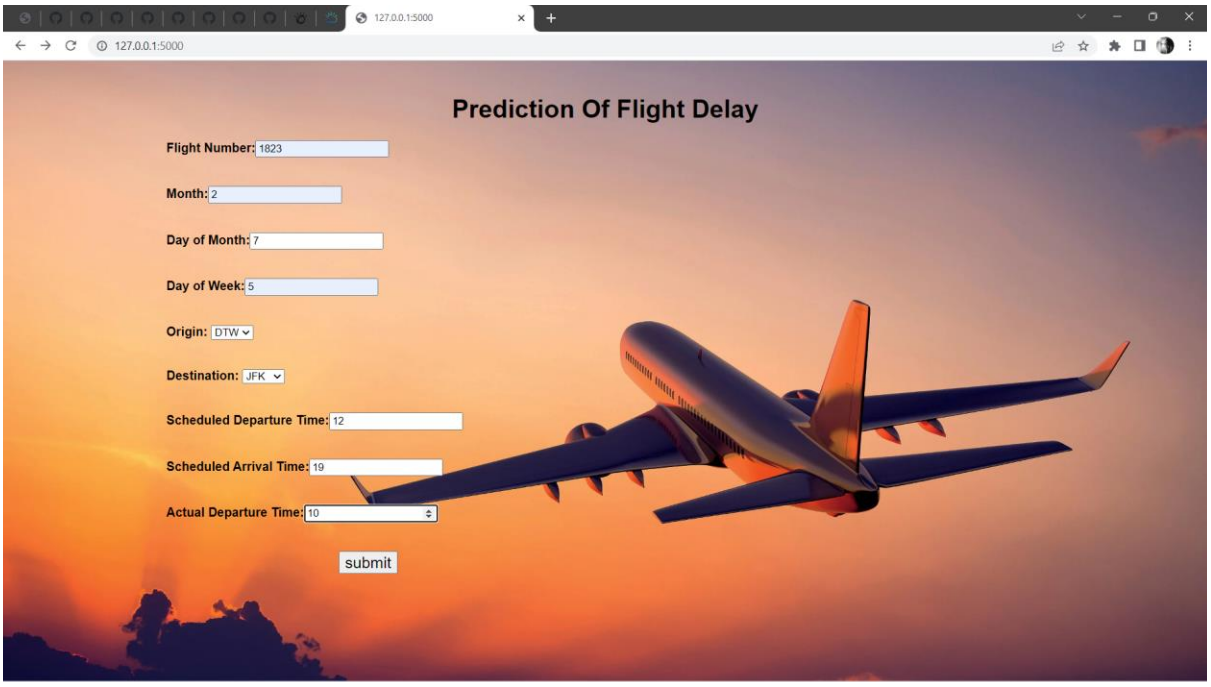
Scheduled Departure Time:

Scheduled Arrival Time:

Actual Departure Time:

The Flight will be on time

While entering the Values that Flight will be delayed.


127.0.0.1:5000

Prediction Of Flight Delay

Flight Number: 1823

Month: 2

Day of Month: 7

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Origin: DTW

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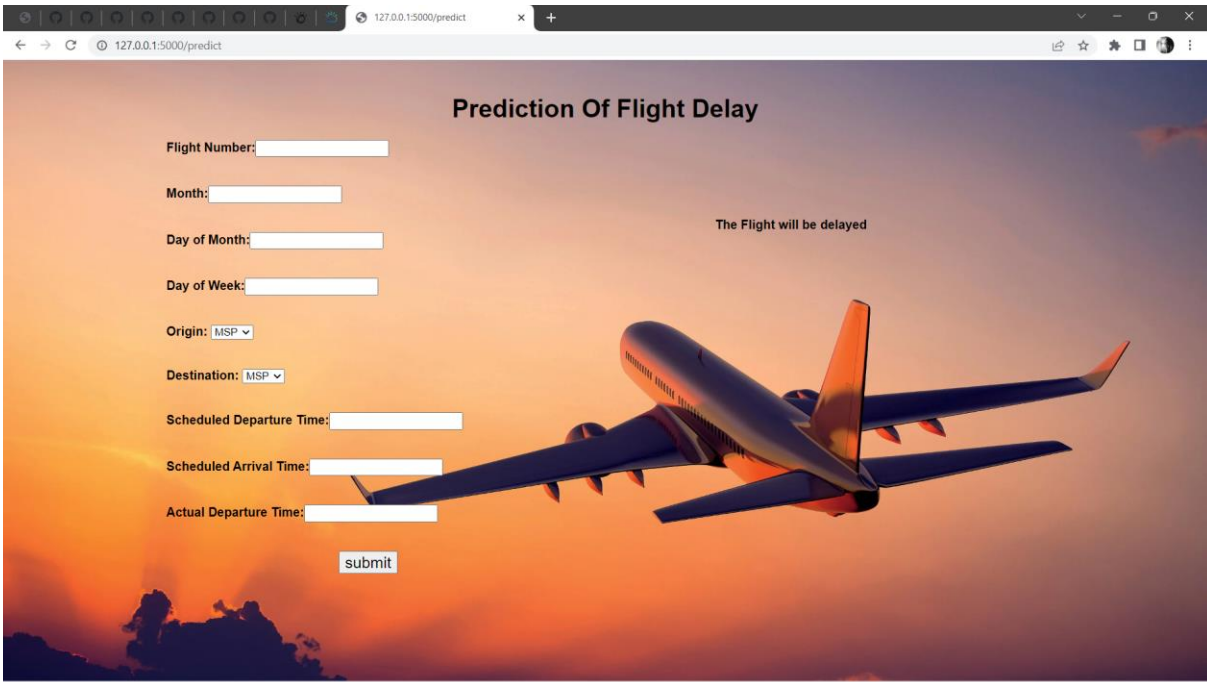
127.0.0.1:5000/predict

Prediction Of Flight Delay

Flight Number:

Month:

Day of Month:

Day of Week:

Origin: MSP

Destination: MSP

Scheduled Departure Time:

Scheduled Arrival Time:

Actual Departure Time:

The Flight will be delayed