

BUILD PYTHON CODE

Date	18 November 2022
Team ID	PNT2022TMID00047
Project Name	Flight delay prediction model using machine learning

PYTHON CODE:

app.py

```
import flask
from flask import request, render_template
from flask_cors import CORS
import joblib

app = flask.Flask(__name__)
CORS(app)

@app.route('/', methods=['GET'])
def sendHomePage():
    return render_template('index.html')

@app.route('/predict', methods=['POST'])
def predictFlight():
    fname = float(request.form['fname'])
    month = float(request.form['month'])
    daymonth = float(request.form['daymonth'])
    dayweek = float(request.form['dayweek'])
    origin = float(request.form['origin'])
    if origin == 0:
        origin_0 = 1
        origin_1 = 0
        origin_2 = 0
        origin_3 = 0
        origin_4 = 0
    if origin == 1:
        origin_0 = 0
        origin_1 = 1
        origin_2 = 0
        origin_3 = 0
        origin_4 = 0
```

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if origin == 2:
    origin_0 = 0
    origin_1 = 0
    origin_2 = 1
    origin_3 = 0
    origin_4 = 0
if origin == 3:
    origin_0 = 0
    origin_1 = 0
    origin_2 = 0
    origin_3 = 1
    origin_4 = 0
if origin == 4:
    origin_0 = 0
    origin_1 = 0
    origin_2 = 0
    origin_3 = 0
    origin_4 = 1
destination = float(request.form['destination'])
if destination == 0:
    destination_0 = 1
    destination_1 = 0
    destination_2 = 0
    destination_3 = 0
    destination_4 = 0
if destination == 1:
    destination_0 = 0
    destination_1 = 1
    destination_2 = 0
    destination_3 = 0
    destination_4 = 0
if destination == 2:
    destination_0 = 0
    destination_1 = 0
    destination_2 = 1
    destination_3 = 0
    destination_4 = 0
if destination == 3:
    destination_0 = 0
    destination_1 = 0
    destination_2 = 0
    destination_3 = 1
    destination_4 = 0
```

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if destination == 4:
    destination_0 = 0
    destination_1 = 0
    destination_2 = 0
    destination_3 = 0
    destination_4 = 1
sarrivalttime = float (request.form['sarrivalttime'])
sdeparttime = float (request.form['sdeparttime'])
adeparttime = float (request.form['adeparttime'])
delay15 = adeparttime - sdeparttime
X = [[fname, month, daymonth, dayweek, sarrivalttime, delay15, origin_0,
origin_1, origin_2, origin_3, origin_4, destination_0, destination_1, destination_2,
destination_3, destination_4]]
model = joblib.load('picklee.pkl')
delay = model.predict(X)[0]
#return render_template('predict.html',predict=delay)

msg = "

if delay == 0.0:
    msg = 'The flight will be on time'
    return render_template('index.html',predict = msg)
if delay == 1.0:
    msg = 'The flight will delayed'
    return render_template('index.html',predict = msg)

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

```