# BUILD PYTHON CODE

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

**PYTHON CODE:**

app.py

```python
import flask
from flask import request,render_template
from flask_cors import CORS
import joblib
import numpy as np
import pandas as pd
import pickle
import os

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

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

@app.route('/predict', methods=['POST'])
def predict():
    fname = float (request.form['fname'])
    month = float (request.form['month'])
    daymonth = float (request.form['daymonth'])
    dayweek = float (request.form['dayweek'])
    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
```

```python
        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 == "alt":
            destination1,destination2,destination3,destination4,destination5 =
0,0,0,1,0

        sarrivaltime = float (request.form['sarrivaltime'])
        sdeparttime = float (request.form['sdeparttime'])
        adeparttime = float (request.form['adeparttime'])
        dept15=int(sdeparttime)-int(adeparttime)
        X = [[fname, month, daymonth, dayweek, sarrivaltime, dept15, origin1,
origin2, origin3, origin4, origin5, destination1, destination2, destination3,
destination4, destination5]]

        model = joblib.load('picklee.pkl')

        y_pred=model.predict(X)

        if y_pred == 0:
            ans="The Flight will be on time"

        else:
```

```python
        ans="The Flight will be delayed"

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

if name == 'main':
    app.debug = True
    app.run()
```