

DEPLOYMENT ON FLASK

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I have selected the data from the below link .

It has two data attributes – income, happiness index.

<https://www.scribbr.com/statistics/simple-linear-regression/#:~:text=Dataset%20for%20simple%20linear%20regression%20%28.csv%29%20Load%20the,%3C-%20lm%20%28happiness%20~%20income%2C%20data%20%3D%20income.data%29>

```
import pickle
import pandas as pd
import numpy as np
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression

csvFile = pd.read_csv('incomedata.csv')

X = csvFile['income']
X = np.reshape(X, (-1, 1))

y = csvFile['happiness']
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=100)

model = LinearRegression()
model.fit(X_train, y_train)
pickle.dump(model, open('model.pickle', 'wb'))
```

THE ABOVE CODE IS USED TO SAVE THE LINEAR MODEL IN PICKLE FORMAT

```

from flask import Flask, jsonify, request
import pickle
import pandas as pd

app=Flask(__name__)

@app.route('/', methods=['GET','POST'])
def home():
    if(request.method == 'GET'):
        data = 'hi my name is SAI SURYA'
        return jsonify({'data':data})

@app.route('/predict/')
def happiness_predict():
    model=pickle.load(open('model.pickle','rb'))
    income=request.args.get('income')
    test_df=pd.DataFrame({'INCOME':[income]})
    pred_happiness=model.predict(test_df)
    return jsonify({'Happineess INDEX':str(pred_happiness)})

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

```

The above code is used to give the routes to the flask .

Postman interface showing a GET request to `http://127.0.0.1:5000`. The response body is displayed in the 'Body' tab, showing a JSON object: `{"data": "hi my name is SAI SURYA"}`. The status is 200 OK, 16 ms, 205 B.

After running the above python script on postman the output will be as follows as flask follows the 1st route when none is mentioned.

Postman interface showing a GET request to `http://127.0.0.1:5000/predict/?income=500`. The response body is displayed in the 'Body' tab, showing a JSON object: `{"Happineess INDEX": "[359.4861306]"}`. The status is 200 OK, 150 ms, 207 B.

ABOVE INPUT ATTRIBUTE IS GIVEN IN POSTMAN INCOME =500 , WHICH GIVES OUPUTUT HAPINESS INDEX