Model development on Flask

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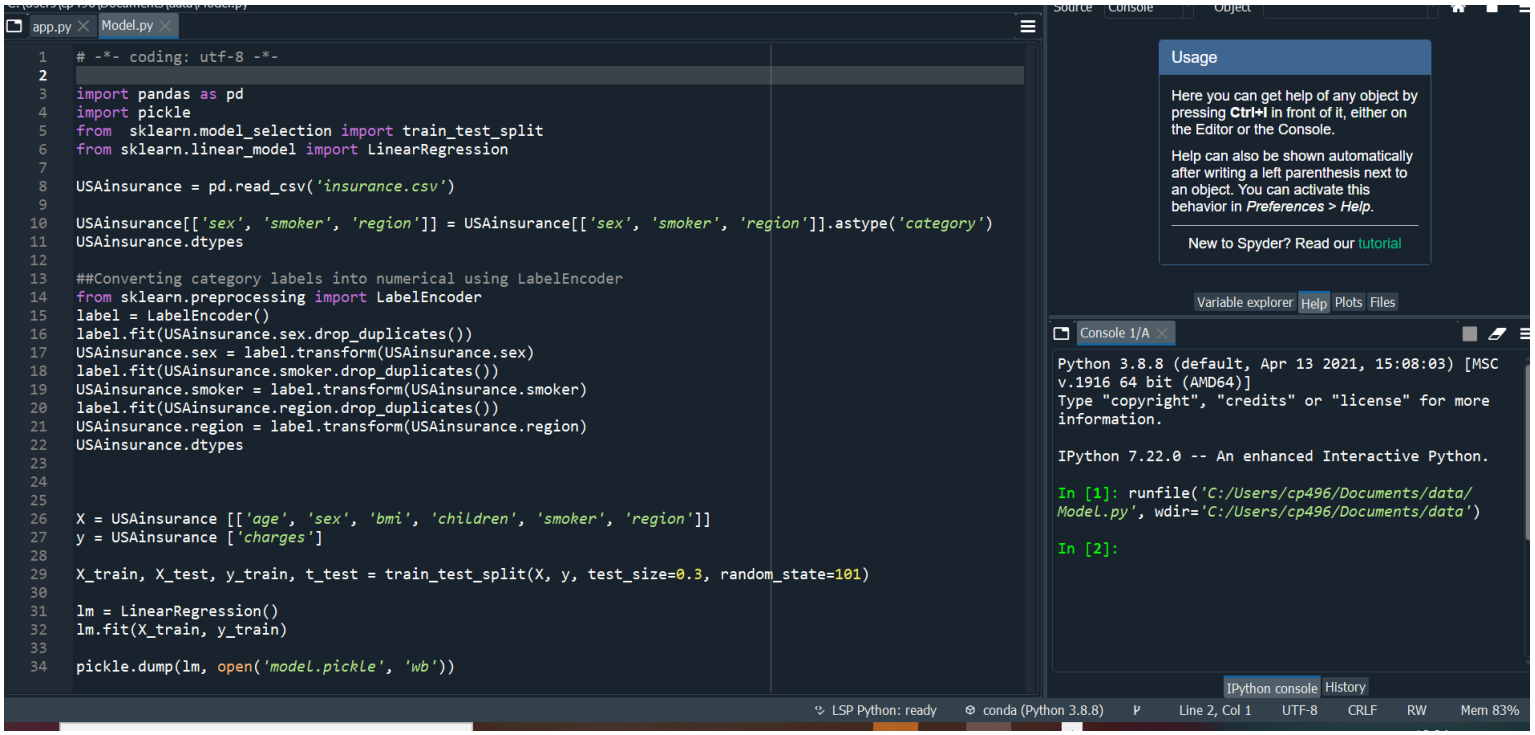
Creating the model



Creating the app

C:\Users\cp496\Documents\data\app.py

app.py | Model.py

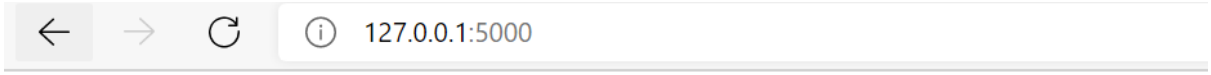
```python
# Creating Flask app for model deployment
import numpy as np
from flask import Flask, jsonify, request, render_template
import pickle

app = Flask(__name__)

# Root endpoint
@app.route('/', methods = ['GET', 'POST'])
def home():
    return render_template('index.html')

# Predict endpoint
@app.route('/predict', methods = ['POST'])
def predict():
    model = pickle.load(open('model.pickle', 'rb'))

    int_features = [int(x) for x in request.form.values()]
    final_features = [np.array(int_features)]
    prediction_lep = model.predict(final_features)

    output = round(prediction_lep[0], 3)

    return render_template('index.html', prediction_text='Insurance charge should be $ {}'.format(output))



if __name__ == "__main__":
    app.run(port = 5000, debug = True)
```

Design of the page

```html
<!DOCTYPE html>
<html >
<!--From https://codepen.io/frytyler/pen/EGdtg-->
<head>
  <meta charset="UTF-8">
  <title>Chandni ML API</title>
  <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300' rel='stylesheet' type='text/css'>
<link rel="stylesheet" href="{{ url_for('static', filename='css/style.css') }}">

</head>

<body>
 <div class="predict">
        <h1>Predicting insurance charge</h1>

     <!-- Main Input For Receiving Query to our ML -->
    <form action="{{ url_for('predict')}}"method="post">

        <p>Age</p>
        <input type="text" name="age" placeholder="age 18 or over" required="required" />
        <br></br>

        <p>Sex</p>
        <select id="sex" class="select" name="sex" placeholder="sex" required="required">
        <option value="0">Female</option>
        <option value="1">Male</option>
        </select>
        <br></br>

        <p>Children</p>
        <input type="text" name="children" placeholder="children" required="required" />
```

```
        <p>Children</p>
        <input type="text" name="children" placeholder="children" required="required" />
        <br></br>

        <p>BMI</p>
        <input type="text" name="bmi" placeholder="bmi" required="required" />
        <br></br>


        <p>Smoker</p>
        <select id="smoker" class="select" name="smoker" placeholder="smoker" required="required">
        <option value="1">Yes</option>
        <option value="0">No</option>
        </select>
        <br></br>

        <p>region</p>
        <select id="region" class="select" name="region" placeholder="region" required="required">
        <option value="3">South West</option>
        <option value="2">South East</option>
        <option value="1">North West</option>
        <option value="0">North East</option>
        </select>

        <br></br>

        <button type="submit" class="btn btn-primary btn-block btn-large">Predict</button>
    </form>

   <br>
   <br>
   {{ prediction_text }}

 </div>
```

Web Page:



Predicting insurance charge

Age

44

Sex

Male

Children

1

BMI

34

Smoker

No

region

South West

Predict

127.0.0.1:5000/predict

Predicting insurance charge

Age

34

Sex

Male

Children

1

BMI

34

Smoker

No

region

South West

Predict

Insurance charge should be $ 14680.192