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DEPLOYMENT ON FLASK

Step1:

Creating the model

1- Importing libraries and initiating the model

```
In [1]: import pickle  
import pandas as pd  
import numpy as np
```

```
In [2]: df = pd.read_csv("iris.data.csv")
```

```
In [3]: from sklearn.neighbors import KNeighborsClassifier
```

```
In [4]: cla = KNeighborsClassifier(n_neighbors=3)
```

2- Reshaping the data

```
In [6]: x = np.array(df.drop("class",axis = 1))
```

```
In [7]: y = np.array(df["class"])
```

```
In [8]: from sklearn.preprocessing import LabelEncoder  
labelencoder_X=LabelEncoder()  
y=labelencoder_X.fit_transform(y)
```

```
In [9]: x = x.reshape((150,4))  
y = y.reshape((-1,1))
```

3- Creating the model

```
In [10]: cla.fit(x,y)
```

```
c:\users\المطرق\appdata\local\programs\python\python39\lib\site-packages\sklearn\neighbors\_classification.py:179: DataConversionWarning: A  
column-vector y was passed when a 1d array was expected. Please change the shape of y to (n_samples,), for example using ravel().  
    return self._fit(X, y)
```

```
KNeighborsClassifier(n_neighbors=3)
```

```
In [11]: cla.predict([x[1]])
```

```
array([0])
```

4- Pickling the model and deploying it on flask

```
in [12]: | with open('model.pkl','wb') as classifier:
           pickle.dump(cla,classifier)

from flask import Flask,render_template,request

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

@app.route('/')
def home():
    return "Hi"

@app.route('/predict',methods=['POST'])
def predict():
    int_features=[float(x) for x in request.form.values()]
    final_features=[np.array(int_features)]
    prediction=model.predict(final_features)

    output = round(prediction[0], 2)
    return output

app.run(debug=True)
```