

Deployment on Flask

Name: Raghavi Gururajan

Batch code: LISUM11:30

Submission date:25/8/2022

Submitted to: Data Glacier

Deployment procedure

Step 1:

Develop ML model: As a part of Data analysis Internship, I have used Linear Regression for the medical insurance personal dataset

```
# Importing the libraries
import numpy as np
import pandas as pd
import pickle
from sklearn import preprocessing

dataset = pd.read_csv('insurance.csv')
le = preprocessing.LabelEncoder()
dataset = dataset.apply(le.fit_transform)
```

```
dataset['bmi'].fillna(dataset['bmi'].mean(), inplace=True)

X = dataset.iloc[:, -1]
```

```
sex = { 'male': '1', 'female': '2' }
if 'female' in sex:
    print('key present')
else:
    print('key not found')
```

key present

```
y = dataset.iloc[:, 1].values
```

```
from sklearn.model_selection import train_test_split
```

```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.33, random_state = 0)
```

```
from sklearn.linear_model import LinearRegression
regression = LinearRegression()
```

```
X_train= X_train.values.reshape(-1, 1)
X_test = X_test.values.reshape(-1, 1)
```

Step2:

Fitted the model with the training dataset

```
#fit the model with training data
regression.fit(X_train, y_train)
y_pred = regression.predict(X_train)
print(y_pred)
```

Step3:

Saved and loaded the model to the disk to compare the results

```
#saving the model to disk
pickle.dump(regression, open('model.pkl', 'wb'))
```

```
# Loading model to compare the results
model = pickle.load(open('model.pkl', 'rb'))
```

```
import keras
from keras.models import Sequential
from keras.layers import Dense
from keras.models import load_model

#empty model
classifier = Sequential()
```

```
X_new = np.linspace(0, 30, 100)
y_new = model.predict(X_new[:, np.newaxis])
```