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Submitted URL: https://github.com/vidya-ganesan/deplyment-on-heroku-pdf-format

Deployment on Flask in python

Step 1: Import the necessary python libraries to run the model.

Step 2: Develop ML model.

Select a dataset. Predict the salary of an employee based on years of experience, test score and interview score using linear regression.

```
In [ ]: #importing necessary libraries
```

```
In [2]: import pandas as pd
        import numpy as np
        from sklearn.model_selection import train_test_split
        from sklearn.linear_model import LinearRegression
        from flask import Flask,request,jsonify
        import pickle
        import json
```

```
In [4]: dataset=pd.read_csv('hiring.csv')
        dataset.head()
```

Out[4]:

	experience	test_score	interview_score	salary
0	four	8	9	50000
1	one	8	6	45000
2	five	6	7	60000
3	two	10	10	65000
4	seven	9	6	70000

```
In [6]: def convert_to_int(word):
            word_dict = {'one':1, 'two':2, 'three':3, 'four':4, 'five':5, 'six':6, 'seven':7, 'eight':8,
                         'nine':9, 'ten':10, 'eleven':11, 'twelve':12, 'zero':0, 0: 0}
            return word_dict[word]
        X = dataset.iloc[:, :3]

        X['experience'] = X['experience'].apply(lambda x : convert_to_int(x))

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

```
In [8]: X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.33,random_state=0)
```

```
In [9]: regressor=LinearRegression()
        regressor.fit(X_train,y_train)
        y_pred=regressor.predict(X_test)
        print(y_pred)

        [70059.33250927 52160.69221261 42456.11866502]
```

Step 3: Saving the ML model to the disk using pickle library

```
In [ ]:  #save the model in disk

In [10]:  pickle.dump(regressor, open('model.pkl','wb'))

In [11]:  model = pickle.load(open('model.pkl','rb'))
          print(model.predict([[2, 9, 6]]))

          [49589.61681088]
```

Step 4: Deployment of model in flask

```
In [ ]:  #deployment of model in flask

In [12]:  app = Flask(__name__)
          model = pickle.load(open('model.pkl', 'rb'))

In [13]:  @app.route('/')
          def home():
              return render_template('index.html')

In [16]:
          @app.route('/predict',methods=['POST'])
          def predict():
              data = request.get_json(force=True)
              prediction = model.predict([np.array(list(data.values()))])
              output = prediction[0]
              return jsonify(output)
```
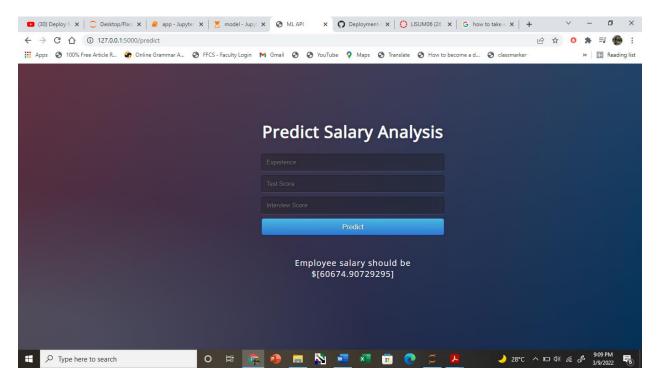
```
In [*]:  if __name__ == "__main__":
             app.run(port=5000)

         * Serving Flask app "__main__" (lazy loading)
         * Environment: production
           WARNING: This is a development server. Do not use it in a production deployment.
           Use a production WSGI server instead.
         * Debug mode: off

         * Running on http://127.0.0.1:5000/ (http://127.0.0.1:5000/) (Press CTRL+C to quit)
```

Step 5: Creating the web app by typing the URL in the browser.
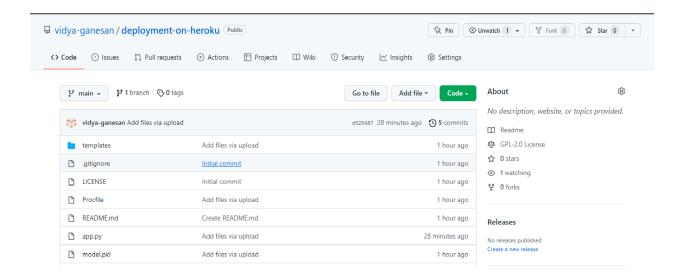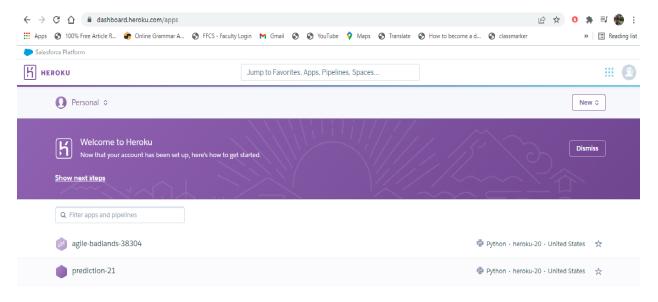
Step 6:

- Created **Procfile** file which contain the command to execute the Heroku app on startup.
- Created a requirement.txt file which contains the dependencies for the flask app.

Step 7: Create a new repository in GitHub and commit the code to the repository.
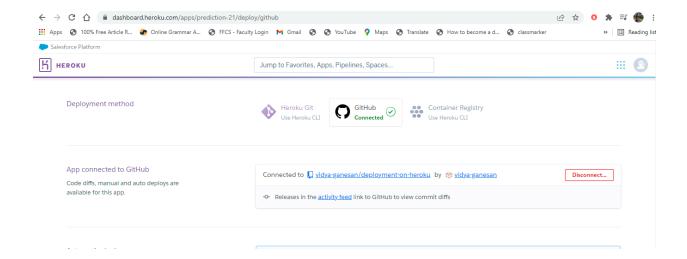
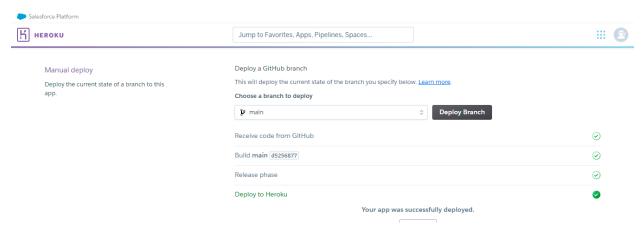**URL: https://github.com/vidya-ganesan/deployment-on-heroku**

Step 8: Open Heroku app.com and then create a new account and login and create a new app in the name prediction-21

Step 9: Link GitHub repository to Heroku app

Step 10: Deploy the model on Heroku

Step 11: Run the successfully deployed app

Predict Salary Analysis

Experience | Test Score | Interview Score | Predict

Employee Salary should be $ 49935.72