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Batch Code: LISUM23: 30

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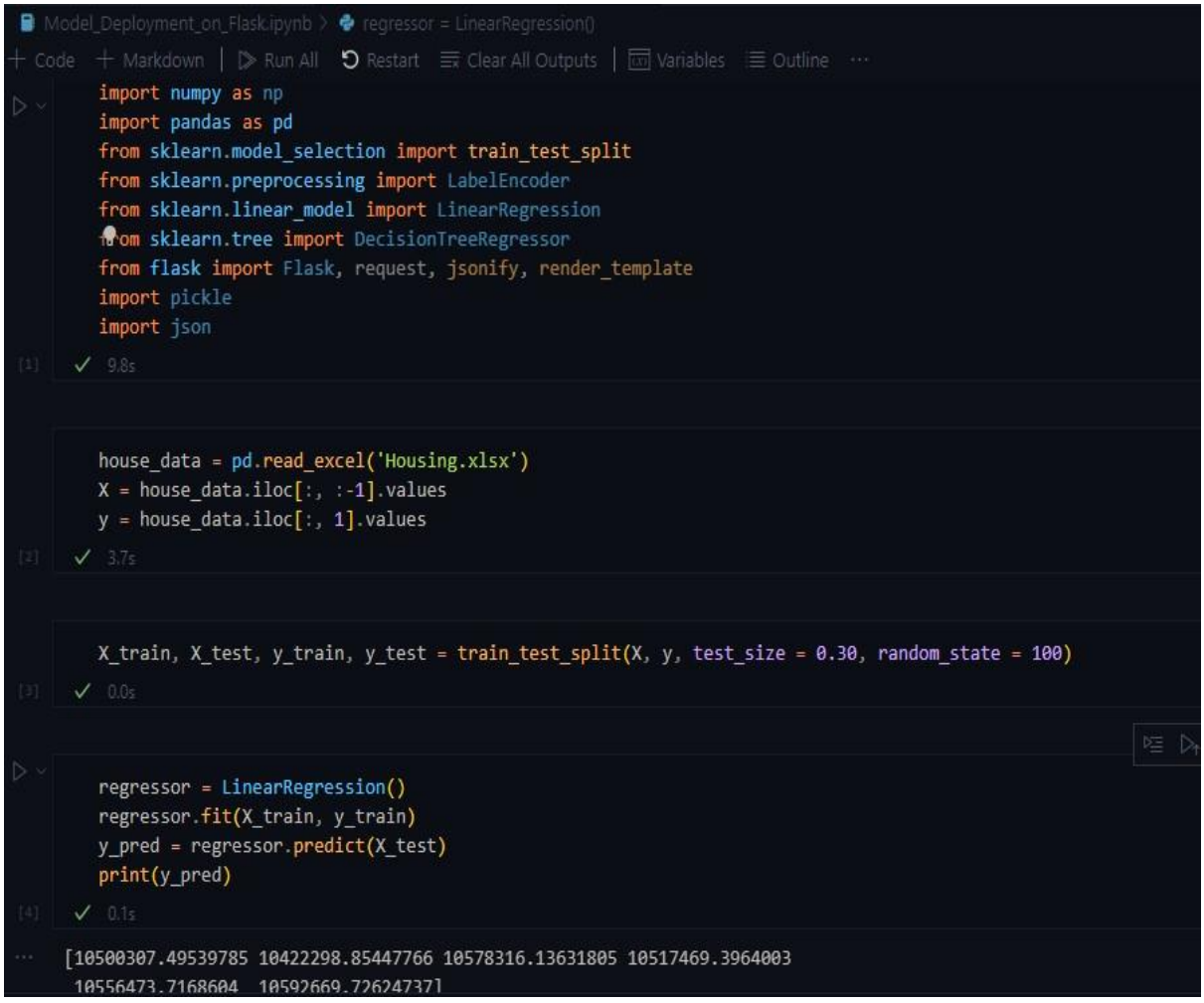
Submitted to: Data Glacier

Deployment of Flask Web App

Step 1:

Developing a model:

Predict the price of a house based on feature ‘area’ using Linear Regression Model.



Step 2:

Saving the trained model as pickle file in the root folder.

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

```
model = pickle.load(open('model.pkl','rb'))
print(model.predict([[7420]]))
```

```
[10544616.40344053]
```

Step 3:

Deployment of model using flask.

```
# Model Deployment
app = Flask(__name__)
model = pickle.load(open('model.pkl','rb'))
```

```
@app.route("/")
def home():
    return render_template("index.html")
```

```
@app.route('/',methods=['POST'])
def predict():
    data = request.get_json(force=True)
    prediction = model.predict([[np.array(data['exp'])]])
    output = prediction[0]
    return jsonify(output)
```

```
if __name__ == '__main__':
    app.run(port=5000)
```

```
 * Serving Flask app '__main__'
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production W
 * Running on http://127.0.0.1:5000
```

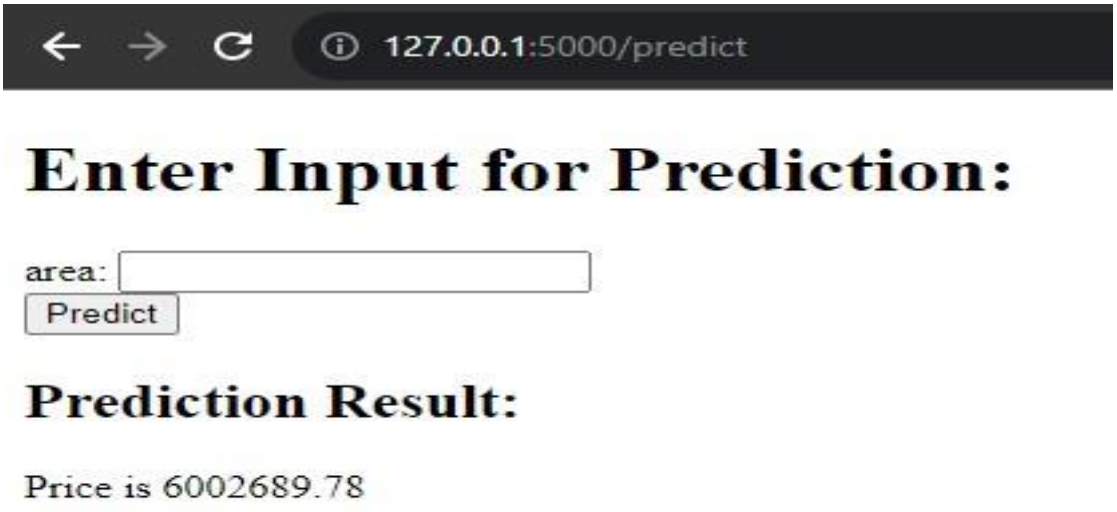
The script creates a Flask app and loads a machine learning model from a pickled file (model.pkl). The app has two routes defined: one for the home page ("/") that renders the "index.html" template, and another for handling POST requests sent to the root URL ("/") for making predictions. When the user submits the input data using the form on the home page, a POST request is sent to the server, and the predict() function is executed to make predictions using the model. The result of the prediction is then returned as a JSON response to the client.

Step 4:

Checking the app.py file in cmd.

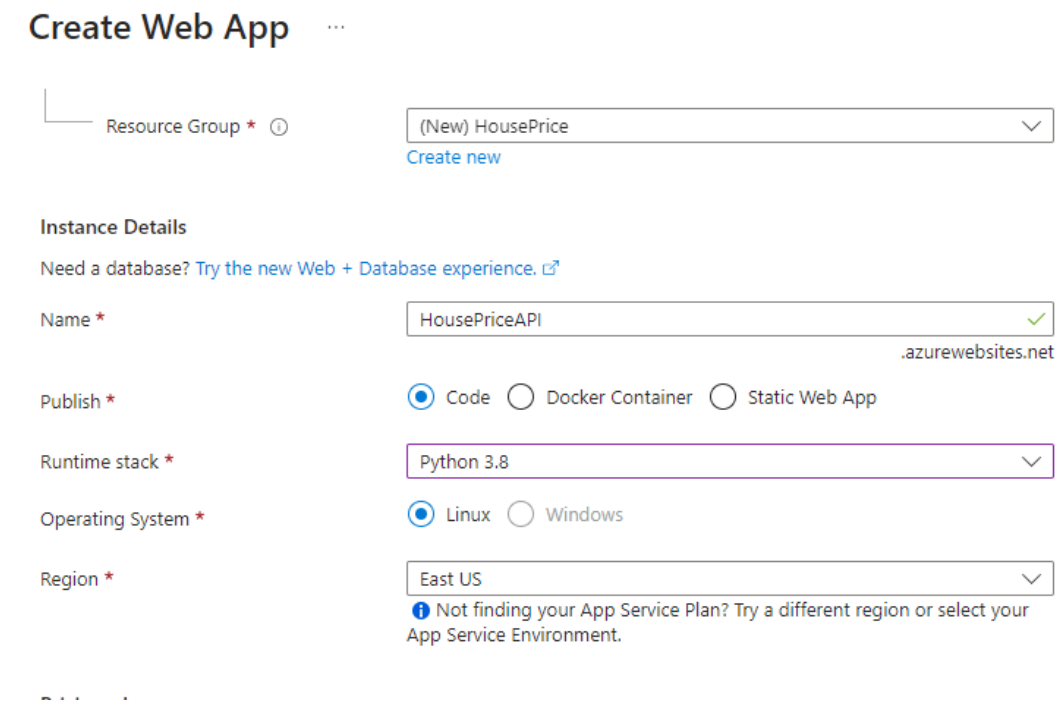
Step 5:

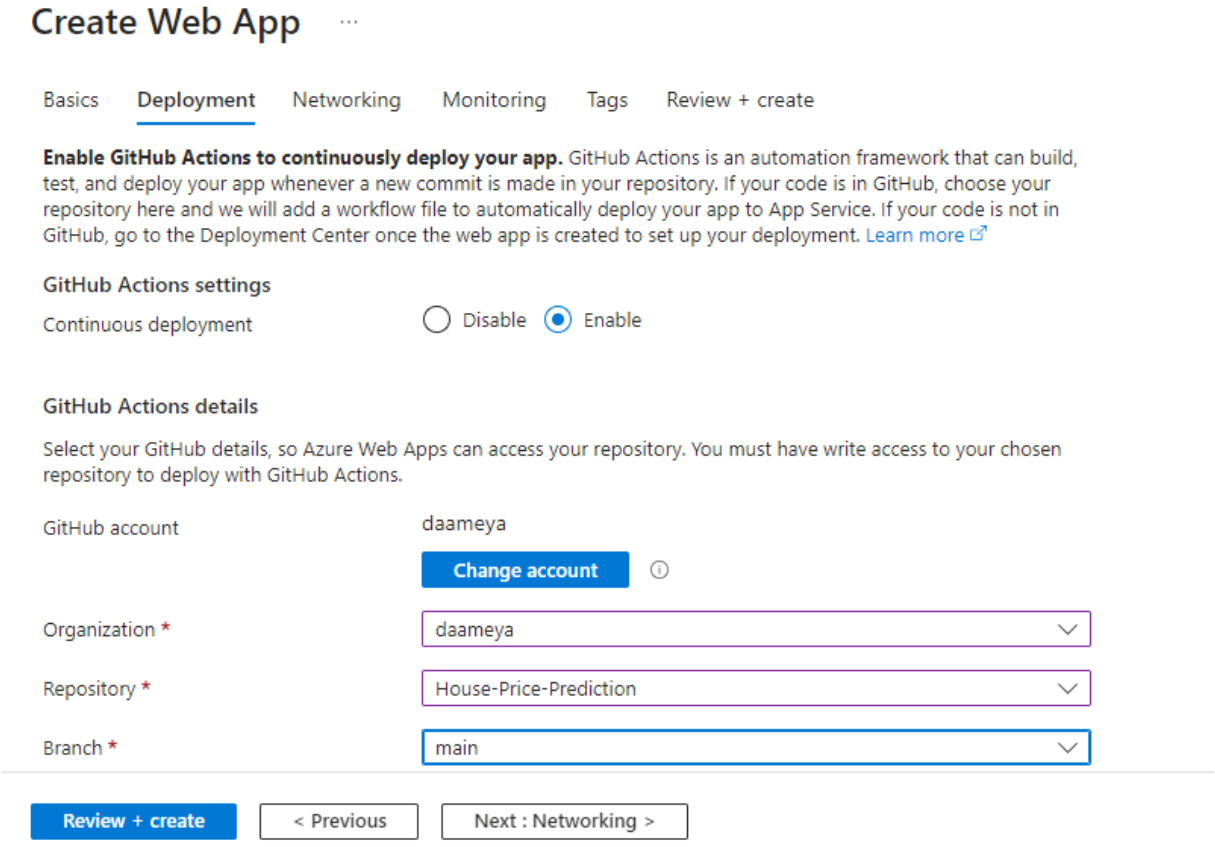
Launching the webapp by typing address “127.0.0.1:5000” in any browser.



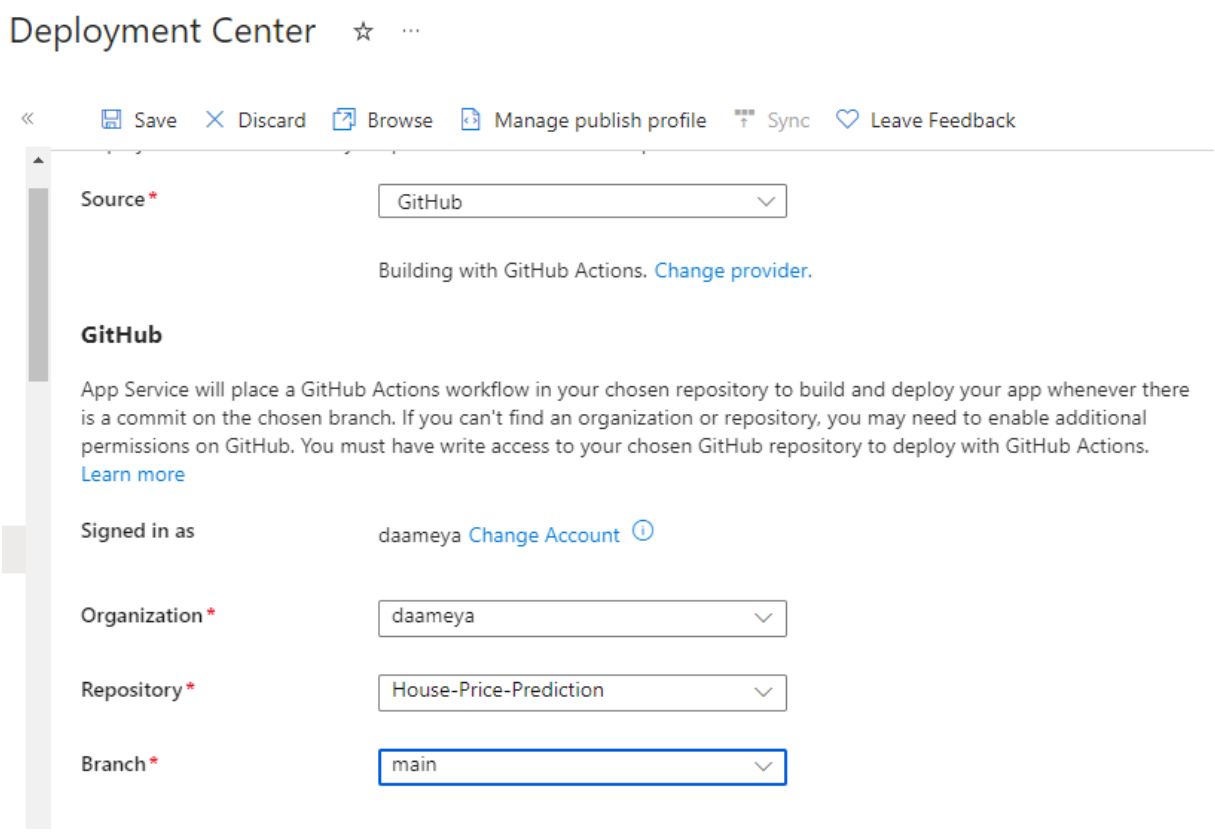
Step 6:

Creating a web app in Azure. While creating the Web application make sure you enable GitHub Actions in Deployment step and register your GitHub account as well.





Step 7:
Review and create the web application and it automatically activate a continuous pipeline with the repository in your GitHub profile.



Step 8:

Use the web address now available in the Actions section of the repository. After the deployment is successful you will be able to see a workflow folder in your repository which is created automatically.