Week4: Deployment on Flask

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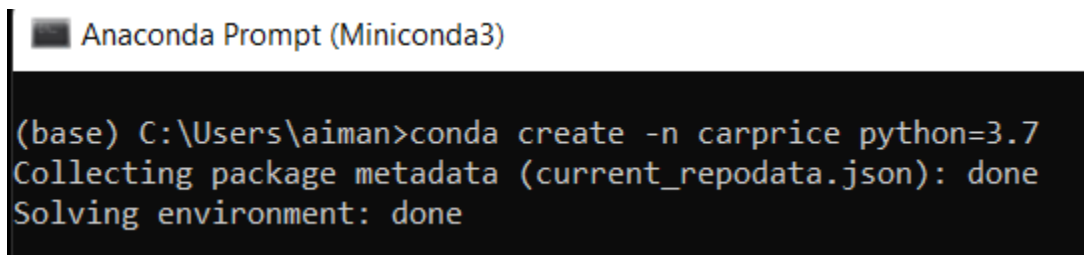Batch Code: LISUM09
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Submitted to: Data Glacier

1. **Creating and new environment and activating the environment:** First, I created a new environment in Anaconda Prompt by using the command below:
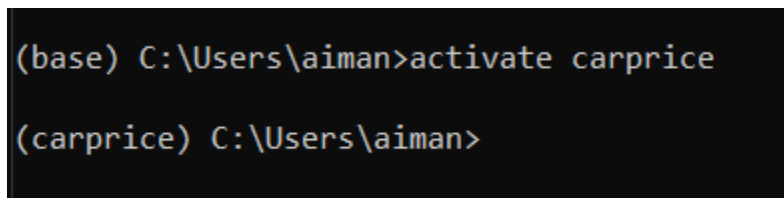
   - conda create -n carprice python=3.7

   Then I activated the environment by using the command below:

   - activate carprice

2. **Running jupyter notebook in that particular environment:** Then I wrote the following commands in Anaconda Prompt to run the jupyter notebook:

   - activate carprice
   - cd OneDrive
   - cd Documents
   - cd Week 4

   Since the files of this assignment were saved in Week 4 folder in Documents, I need to access the folder location to run the jupyter notebook to create a model on the car dataset.

However, The dataset was a car dataset with different features of different car models. The dataset was downloaded from kaggle (Vehicle dataset | Kaggle).

After writing the commands, the jupyter notebook opened in the browser as shown below:
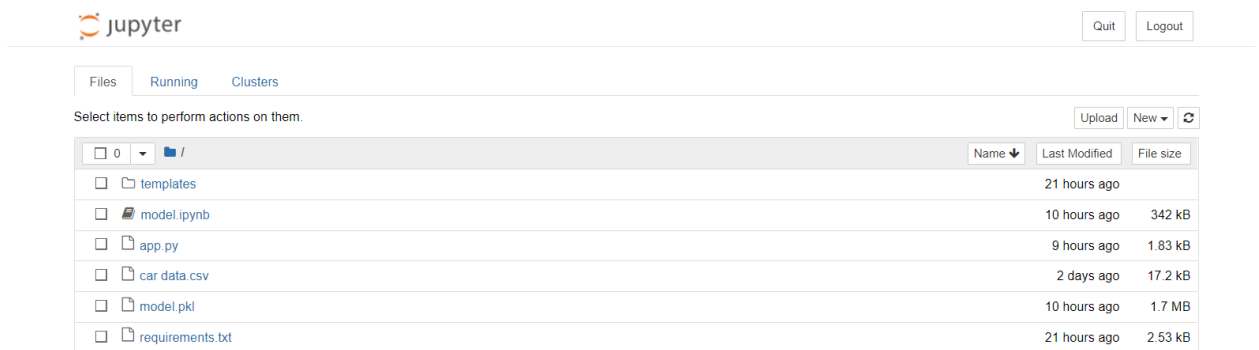
3. **Creating a Machine Learning model for the dataset:** Then I applied a few exploratory data analysis techniques to the dataset and implemented a Random Forest model to predict the selling price of the cars based on the other features. After implementing the model, I created a pickle file at the end of the notebook as shown below to store all the information of the data.

```
In [50]:  import pickle
          file = open('model.pkl', 'wb')

          pickle.dump(rf, file)
```

☐ 🗎 model.pkl		seconds ago	1.7 MB

4. **Creating the requirements.txt file:** Then I created the requirements.text file to view all the libraries that were required to build the model in jupyter notebook by using the commands below:

- activate carprice
- cd OneDrive
- cd Documents
- cd Week 4

☐ 🗎 requirements.txt		3 minutes ago	1.55 kB

5. **Creating the frontend using html:** Then I wrote codes to create the frontend of the website using html in Visual studio Code and saved the file as app.py in that particular folder.

☐ 🗎 app.py		9 hours ago	1.83 kB

6. **Installing the required libraries in Anaconda Prompt:** I installed required libraries such as flask, sklearn before running the app.py file.

```
Anaconda Prompt (Miniconda3) - python app.py                          —    ☐    ✕

(base) C:\Users\aiman>pip install flask
Collecting flask
  Using cached Flask-2.1.2-py3-none-any.whl (95 kB)
Requirement already satisfied: Jinja2>=3.0 in c:\programdata\miniconda3\lib\site-packages (from flask) (3.1.2)
Collecting click>=8.0
  Using cached click-8.1.3-py3-none-any.whl (96 kB)
Collecting itsdangerous>=2.0
  Using cached itsdangerous-2.1.2-py3-none-any.whl (15 kB)
Collecting Werkzeug>=2.0
  Using cached Werkzeug-2.1.2-py3-none-any.whl (224 kB)
Collecting importlib-metadata>=3.6.0; python_version < "3.10"
  Using cached importlib_metadata-4.11.4-py3-none-any.whl (18 kB)
Requirement already satisfied: MarkupSafe>=2.0 in c:\programdata\miniconda3\lib\site-packages (from Jinja2>=3.0->flask)
(2.1.1)
Requirement already satisfied: colorama; platform_system == "Windows" in c:\programdata\miniconda3\lib\site-packages (fr
om click>=8.0->flask) (0.4.4)
Requirement already satisfied: zipp>=0.5 in c:\programdata\miniconda3\lib\site-packages (from importlib-metadata>=3.6.0;
 python_version < "3.10"->flask) (3.8.0)
Installing collected packages: click, itsdangerous, Werkzeug, importlib-metadata, flask
Successfully installed Werkzeug-2.1.2 click-8.1.3 flask-2.1.2 importlib-metadata-4.11.4 itsdangerous-2.1.2

(base) C:\Users\aiman>pip install sklearn
Requirement already satisfied: sklearn in c:\programdata\miniconda3\lib\site-packages (0.0)
Requirement already satisfied: scikit-learn in c:\programdata\miniconda3\lib\site-packages (from sklearn) (1.1.1)
Requirement already satisfied: numpy>=1.17.3 in c:\programdata\miniconda3\lib\site-packages (from scikit-learn->sklearn)
 (1.22.4)
Requirement already satisfied: threadpoolctl>=2.0.0 in c:\programdata\miniconda3\lib\site-packages (from scikit-learn->s
klearn) (3.1.0)
Requirement already satisfied: scipy>=1.3.2 in c:\programdata\miniconda3\lib\site-packages (from scikit-learn->sklearn)
```

7. **Running app.py in Anaconda Prompt:** Then I wrote the command to run the app.py file as shown below:

- python app.py

Then I copy pasted the given link (http://127.0.0.1:5000/) on the browser and got the website to input data for car price prediction.

8. **Providing necessary information to get the selling price:** Then I provided the required information to get the selling price of a car and got the result when I clicked on the "Get the Selling Price" button.

Please provide the following information below:

Year

2014

What is the Showroom Price?(In lakhs)

5.59

How Many Kilometers Drived?

27000

How much owners previously had the car(0 or 1 or 2) ?

0

Enter the Fuel type:

Petrol

Are you a Dealer or an Individual?

Dealer

Enter the Transmission type:

Manual C

Get the Selling Price

You Can Sell The Car at 4.12