Matplot - Assignment_01_Solution

July 3, 2020

1 Assignment 01: Draw a Pair Plot Using Seaborn Library

The comments/sections provided are your cues to perform the assignment. You don't need to limit yourself to the number of rows/cells provided. You can add additional rows in each section to add more lines of code.

If at any point in time you need help on solving this assignment, view our demo video to understand the different steps of the code.

Happy coding!

1: View and add the dataset.

[3]:
```
#Import the required library
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

[4]:
```
#View the plot in notebook
%matplotlib inline
```

[50]:
```
#Import the dataset
df_auto_dataset = pd.read_csv("auto_data.csv")
```

[51]:
```
#View the top 5 reords
df_auto_dataset.head()
```

[51]:

	mpg	cylinders	displacement	horsepower	weight	acceleration	model_year	origin	name
0	18.0	8	307.0	130	3504	12.0	70	1	chevrolet chevelle malibu
1	15.0	8	350.0	165	3693	11.5	70	1	buick skylark 320
2	18.0	8	318.0	150	3436	11.0	70		
3	16.0	8	304.0	150	3433	12.0	70		
4	17.0	8	302.0	140	3449	10.5	70		

```
2       1         plymouth satellite
3       1              amc rebel sst
4       1                ford torino
```

2: Write a user-defined function for origin

[52]:
```
#use apply function
def origin1(num):
    if num==1:
        return 'USA'
    elif num==2:
        return 'Europe'
    else:
        return 'Asia'
```

[53]:
```
df_auto_dataset["origin"] = df_auto_dataset["origin"].apply(origin1)
```

[54]:
```
#view first 30 data points
df_auto_dataset.head(30)
```

[54]:

	mpg	cylinders	displacement	horsepower	weight	acceleration	\
0	18.0	8	307.0	130	3504	12.0	
1	15.0	8	350.0	165	3693	11.5	
2	18.0	8	318.0	150	3436	11.0	
3	16.0	8	304.0	150	3433	12.0	
4	17.0	8	302.0	140	3449	10.5	
5	15.0	8	429.0	198	4341	10.0	
6	14.0	8	454.0	220	4354	9.0	
7	14.0	8	440.0	215	4312	8.5	
8	14.0	8	455.0	225	4425	10.0	
9	15.0	8	390.0	190	3850	8.5	
10	15.0	8	383.0	170	3563	10.0	
11	14.0	8	340.0	160	3609	8.0	
12	15.0	8	400.0	150	3761	9.5	
13	14.0	8	455.0	225	3086	10.0	
14	24.0	4	113.0	95	2372	15.0	
15	22.0	6	198.0	95	2833	15.5	
16	18.0	6	199.0	97	2774	15.5	
17	21.0	6	200.0	85	2587	16.0	
18	27.0	4	97.0	88	2130	14.5	
19	26.0	4	97.0	46	1835	20.5	
20	25.0	4	110.0	87	2672	17.5	
21	24.0	4	107.0	90	2430	14.5	
22	25.0	4	104.0	95	2375	17.5	
23	26.0	4	121.0	113	2234	12.5	
24	21.0	6	199.0	90	2648	15.0	
25	10.0	8	360.0	215	4615	14.0	

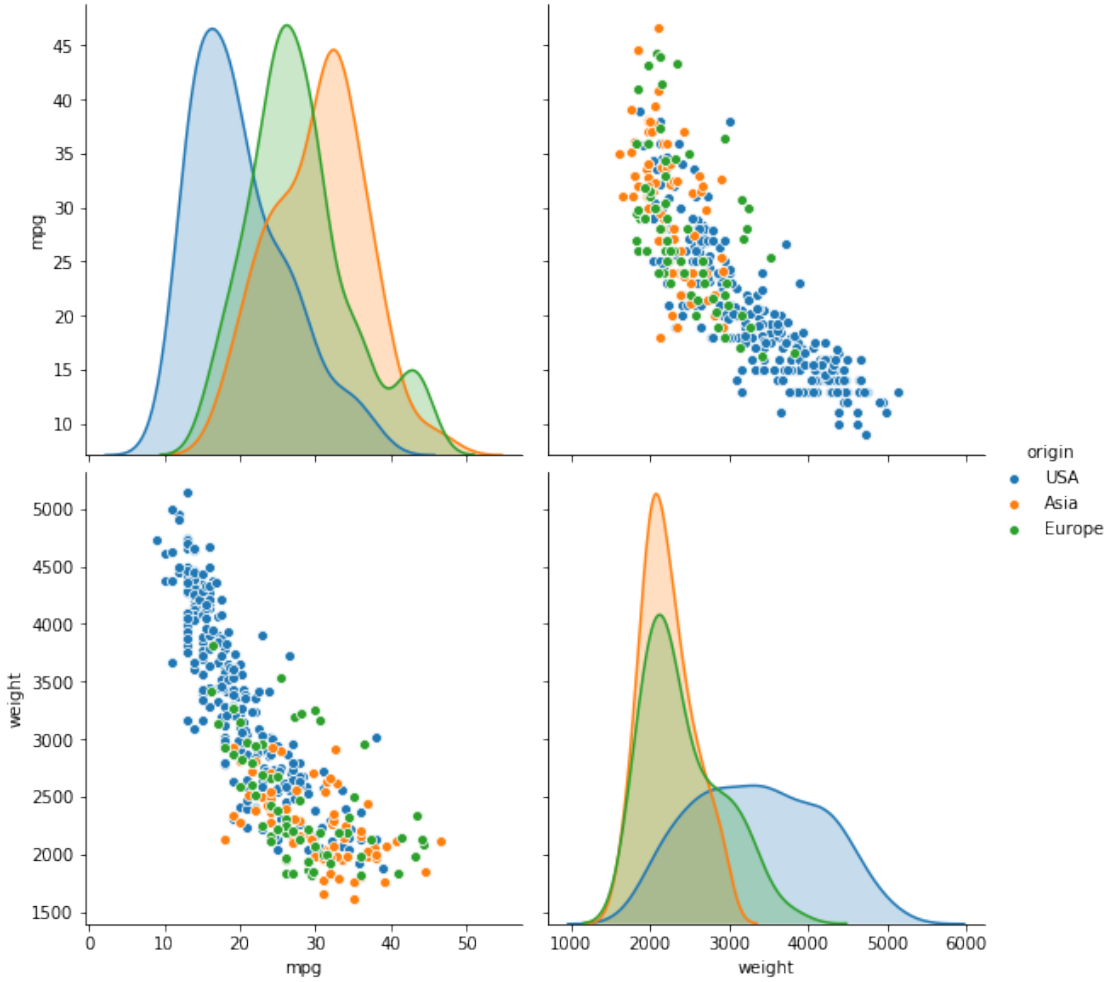
```
26  10.0          8         307.0        200    4376          15.0
27  11.0          8         318.0        210    4382          13.5
28   9.0          8         304.0        193    4732          18.5
29  27.0          4          97.0         88    2130          14.5

    model_year  origin                       name
0           70     USA    chevrolet chevelle malibu
1           70     USA            buick skylark 320
2           70     USA           plymouth satellite
3           70     USA                amc rebel sst
4           70     USA                  ford torino
5           70     USA             ford galaxie 500
6           70     USA             chevrolet impala
7           70     USA            plymouth fury iii
8           70     USA             pontiac catalina
9           70     USA           amc ambassador dpl
10          70     USA          dodge challenger se
11          70     USA           plymouth 'cuda 340
12          70     USA        chevrolet monte carlo
13          70     USA      buick estate wagon (sw)
14          70    Asia        toyota corona mark ii
15          70     USA              plymouth duster
16          70     USA                   amc hornet
17          70     USA               ford maverick
18          70    Asia                datsun pl510
19          70  Europe  volkswagen 1131 deluxe sedan
20          70  Europe                 peugeot 504
21          70  Europe                 audi 100 ls
22          70  Europe                    saab 99e
23          70  Europe                    bmw 2002
24          70     USA                 amc gremlin
25          70     USA                   ford f250
26          70     USA                   chevy c20
27          70     USA                  dodge d200
28          70     USA                     hi 1200d
29          71    Asia                datsun pl510
```

3: Draw the pair plot using sns for mpg, weight,orign and with hue origin, set the size to 4

[59]:
```
sns.pairplot(df_auto_dataset[["mpg","weight","origin"]],hue="origin", size=4)
```

```
C:\Users\Naman\anaconda3\lib\site-packages\seaborn\axisgrid.py:2079:
UserWarning: The `size` parameter has been renamed to `height`; please update
your code.
  warnings.warn(msg, UserWarning)
```

[59]: <seaborn.axisgrid.PairGrid at 0x1088c988>



[ ]: