

21/07/2023

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In [ ]: import numpy as np
import pandas as pd
```

```
In [29]: x=pd.read_csv(r"C:\Users\user\Downloads\fiat500_VehicleSelection_Dataset.csv")
x
```

Out[29]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon
0	1	lounge	51	882	25000	1	44.907242	8.611560
1	2	pop	51	1186	32500	1	45.666359	12.241890
2	3	sport	74	4658	142228	1	45.503300	11.417840
3	4	lounge	51	2739	160000	1	40.633171	17.634609
4	5	pop	73	3074	106880	1	41.903221	12.495650
...
1533	1534	sport	51	3712	115280	1	45.069679	7.704920
1534	1535	lounge	74	3835	112000	1	45.845692	8.666870
1535	1536	pop	51	2223	60457	1	45.481541	9.413480
1536	1537	lounge	51	2557	80750	1	45.000702	7.682270
1537	1538	pop	51	1766	54276	1	40.323410	17.568270

1538 rows × 9 columns



```
In [48]: x.dtypes
```

```
Out[48]: ID                int64
model                object
engine_power         int64
age_in_days          int64
km                   int64
previous_owners      int64
lat                  float64
lon                  float64
price                int64
dtype: object
```

In [31]: `x.head()`

Out[31]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
0	1	lounge	51	882	25000	1	44.907242	8.611560	8900
1	2	pop	51	1186	32500	1	45.666359	12.241890	8800
2	3	sport	74	4658	142228	1	45.503300	11.417840	4200
3	4	lounge	51	2739	160000	1	40.633171	17.634609	6000
4	5	pop	73	3074	106880	1	41.903221	12.495650	5700

In [32]: `x.tail()`

Out[32]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
1533	1534	sport	51	3712	115280	1	45.069679	7.70492	
1534	1535	lounge	74	3835	112000	1	45.845692	8.66687	
1535	1536	pop	51	2223	60457	1	45.481541	9.41348	
1536	1537	lounge	51	2557	80750	1	45.000702	7.68227	
1537	1538	pop	51	1766	54276	1	40.323410	17.56827	

In [33]: `x.columns`

Out[33]: Index(['ID', 'model', 'engine_power', 'age_in_days', 'km', 'previous_owners', 'lat', 'lon', 'price'], dtype='object')

In [34]: `x.index`

Out[34]: RangeIndex(start=0, stop=1538, step=1)

In [35]: `x.describe()`

Out[35]:

	ID	engine_power	age_in_days	km	previous_owners	lat	lon	price
count	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000	1
mean	769.500000	51.904421	1650.980494	53396.011704	1.123537	43.541361		
std	444.126671	3.988023	1289.522278	40046.830723	0.416423	2.133518		
min	1.000000	51.000000	366.000000	1232.000000	1.000000	36.855839		
25%	385.250000	51.000000	670.000000	20006.250000	1.000000	41.802990		
50%	769.500000	51.000000	1035.000000	39031.000000	1.000000	44.394096		
75%	1153.750000	51.000000	2616.000000	79667.750000	1.000000	45.467960		
max	1538.000000	77.000000	4658.000000	235000.000000	4.000000	46.795612		

In [36]: `x["lon"]`

Out[36]:

```
0      8.611560
1     12.241890
2     11.417840
3     17.634609
4     12.495650
...
1533    7.704920
1534    8.666870
1535    9.413480
1536    7.682270
1537   17.568270
Name: lon, Length: 1538, dtype: float64
```

In [37]: `x[0:2]`

Out[37]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
0	1	lounge	51	882	25000	1	44.907242	8.61156	8900
1	2	pop	51	1186	32500	1	45.666359	12.24189	8800

In [38]: `x.iloc[0:2]`

Out[38]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
0	1	lounge	51	882	25000	1	44.907242	8.61156	8900
1	2	pop	51	1186	32500	1	45.666359	12.24189	8800

In [39]: `x.loc[0:3]`

Out[39]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
0	1	lounge	51	882	25000	1	44.907242	8.611560	8900
1	2	pop	51	1186	32500	1	45.666359	12.241890	8800
2	3	sport	74	4658	142228	1	45.503300	11.417840	4200
3	4	lounge	51	2739	160000	1	40.633171	17.634609	6000

In [44]: `x.loc["lon":"lat"]`

Out[44]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
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In [45]: `x[x["km"]<=2]`

Out[45]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
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In [47]:

x.fillna(value=5)

Out[47]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon
0	1	lounge	51	882	25000	1	44.907242	8.611560
1	2	pop	51	1186	32500	1	45.666359	12.241890
2	3	sport	74	4658	142228	1	45.503300	11.417840
3	4	lounge	51	2739	160000	1	40.633171	17.634609
4	5	pop	73	3074	106880	1	41.903221	12.495650
...
1533	1534	sport	51	3712	115280	1	45.069679	7.704920
1534	1535	lounge	74	3835	112000	1	45.845692	8.666870
1535	1536	pop	51	2223	60457	1	45.481541	9.413480
1536	1537	lounge	51	2557	80750	1	45.000702	7.682270
1537	1538	pop	51	1766	54276	1	40.323410	17.568270

1538 rows × 9 columns

In [49]:

x.dropna()

Out[49]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon
0	1	lounge	51	882	25000	1	44.907242	8.611560
1	2	pop	51	1186	32500	1	45.666359	12.241890
2	3	sport	74	4658	142228	1	45.503300	11.417840
3	4	lounge	51	2739	160000	1	40.633171	17.634609
4	5	pop	73	3074	106880	1	41.903221	12.495650
...
1533	1534	sport	51	3712	115280	1	45.069679	7.704920
1534	1535	lounge	74	3835	112000	1	45.845692	8.666870
1535	1536	pop	51	2223	60457	1	45.481541	9.413480
1536	1537	lounge	51	2557	80750	1	45.000702	7.682270
1537	1538	pop	51	1766	54276	1	40.323410	17.568270

In []: