21/07/23 mk2

In [24]:
```
import numpy as np
import pandas as pd
```

In [25]:
```
x=pd.read_csv(r"C:\Users\user\Downloads\fiat500_VehicleSelection_Dataset.csv")
x
```

Out[25]:

	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 [26]:
```
x. dtypes
```

Out[26]:
```
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 [5]:
```
x. dtypes
```

Out[5]:
```
Country                           object
Region                            object
Happiness Rank                     int64
Happiness Score                  float64
Standard Error                   float64
Economy (GDP per Capita)         float64
Family                           float64
Health (Life Expectancy)         float64
Freedom                          float64
Trust (Government Corruption)    float64
Generosity                       float64
Dystopia Residual                float64
dtype: object
```

In [27]:
```
x.tail()
```

Out[27]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	p
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 [28]:
```
x.columns
```

Out[28]:
```
Index(['ID', 'model', 'engine_power', 'age_in_days', 'km', 'previous_owners',
       'lat', 'lon', 'price'],
      dtype='object')
```

In [29]:
```
x. index
```

Out[29]:
```
RangeIndex(start=0, stop=1538, step=1)
```

In [30]:
```
x.describe()
```

Out[30]:

	ID	engine_power	age_in_days	km	previous_owners	lat	
count	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 [31]:
```
x["km"]
```

Out[31]:
```
0        25000
1        32500
2       142228
3       160000
4       106880
         ...
1533    115280
1534    112000
1535     60457
1536     80750
1537     54276
Name: km, Length: 1538, dtype: int64
```

In [32]:
```
x.iloc[0:2]
```

Out[32]:

	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 [33]:
```
x.loc[0:3]
```

Out[33]:

	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 [34]:
```
x.loc["km":"lon"]
```

Out[34]:

ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price

In [35]:
```
x[x["price"]<=2]
```

Out[35]:

ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price

In [36]:
```
x.fillna(value=5)
```

Out[36]:

	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 [37]:
```
x.dropna()
```

Out[37]:

	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 [ ]:
```

```