In [1]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [2]:
```
df = pd.read_csv("C:/Users/91801/Downloads/Facebook metrics/dataset_Facebook.csv",sep=";")
df
```

Out[2]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Lifetime Post Consumers	Lifetime Post Consumptions	Imp b w li
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	159	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	1674	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	154	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	1119	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	580	
...	...	...	...	...	...	...	...	...	...	...	...	...	
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	708	985	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	508	687	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	572	795	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	574	832	
499	81370	Photo	2	1	4	4	NaN	4188	7292	564	524	743	

500 rows × 19 columns

In [3]:
```
df.head()
```

Out[3]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Lifetime Post Consumers	Lifetime Post Consumptions	Li Impres by wh like
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	159	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	1674	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	154	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	1119	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	580	

In [4]:
```
df.tail()
```

Out[4]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Lifetime Post Consumers	Lifetime Post Consumptions	L Impre by wh like
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	708	985	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	508	687	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	572	795	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	574	832	
499	81370	Photo	2	1	4	4	NaN	4188	7292	564	524	743	

In [5]:
```
df.isnull().sum()
```

Out[5]:
```
Page total likes                                                  0
Type                                                              0
Category                                                          0
Post Month                                                        0
Post Weekday                                                      0
Post Hour                                                         0
Paid                                                              1
Lifetime Post Total Reach                                         0
Lifetime Post Total Impressions                                   0
Lifetime Engaged Users                                            0
Lifetime Post Consumers                                           0
Lifetime Post Consumptions                                        0
Lifetime Post Impressions by people who have liked your Page      0
Lifetime Post reach by people who like your Page                  0
Lifetime People who have liked your Page and engaged with your post    0
comment                                                           0
like                                                              1
share                                                             4
Total Interactions                                                0
dtype: int64
```

In [6]:
```
df.dropna(how='any',axis=0)
```

Out[6]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Lifetime Post Consumers	Lifetime Post Consumptions	Imp b v li
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	159	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	1674	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	154	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	1119	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	580	
...	...	...	...	...	...	...	...	...	...	...	...	...	
494	85093	Photo	3	1	7	10	0.0	5400	9218	810	756	1003	
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	708	985	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	508	687	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	572	795	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	574	832	

495 rows × 19 columns

In [7]:
```
df1=df.loc[1:245,['Category','Lifetime Post Total Reach','Type','Total Interactions']]
df2=df.loc[246:500,['Post Month','Post Weekday','Post Hour','Lifetime Post Consumers']]
```

In [8]:
```
df1
```

Out[8]:

	Category	Lifetime Post Total Reach	Type	Total Interactions
1	2	10460	Status	164
2	3	2413	Photo	80
3	2	50128	Photo	1777
4	2	7244	Photo	393
5	2	10472	Status	186
...	...	...	...	...
241	1	4892	Photo	144
242	2	17360	Status	572
243	1	21872	Video	409
244	2	180480	Photo	6334
245	1	44464	Photo	188

245 rows × 4 columns

In [9]:
```
df2
```

Out[9]:

	Post Month	Post Weekday	Post Hour	Lifetime Post Consumers
246	7	2	8	503
247	7	1	12	482
248	7	1	6	512
249	7	7	11	444
250	7	7	6	570
...	...	...	...	...
495	1	7	2	708
496	1	5	8	508
497	1	5	2	572
498	1	4	11	574
499	1	4	4	524

254 rows × 4 columns

In [10]:
```
df_row = pd.concat([df1,df2])
df_row
```

Out[10]:

	Category	Lifetime Post Total Reach	Type	Total Interactions	Post Month	Post Weekday	Post Hour	Lifetime Post Consumers
1	2.0	10460.0	Status	164.0	NaN	NaN	NaN	NaN
2	3.0	2413.0	Photo	80.0	NaN	NaN	NaN	NaN
3	2.0	50128.0	Photo	1777.0	NaN	NaN	NaN	NaN
4	2.0	7244.0	Photo	393.0	NaN	NaN	NaN	NaN
5	2.0	10472.0	Status	186.0	NaN	NaN	NaN	NaN
...	...	...	...	...	...	...	...	...
495	NaN	NaN	NaN	NaN	1.0	7.0	2.0	708.0
496	NaN	NaN	NaN	NaN	1.0	5.0	8.0	508.0
497	NaN	NaN	NaN	NaN	1.0	5.0	2.0	572.0
498	NaN	NaN	NaN	NaN	1.0	4.0	11.0	574.0
499	NaN	NaN	NaN	NaN	1.0	4.0	4.0	524.0

499 rows × 8 columns

In [11]:
```
df.shape
```

Out[11]:
```
(500, 19)
```

In [12]:
```
df.melt()
```

Out[12]:

	variable	value
0	Page total likes	139441
1	Page total likes	139441
2	Page total likes	139441
3	Page total likes	139441
4	Page total likes	139441
...	...	...
9495	Total Interactions	84
9496	Total Interactions	75
9497	Total Interactions	115
9498	Total Interactions	136
9499	Total Interactions	119

9500 rows × 2 columns

In [13]:
```
df.transpose()
```

Out[13]:

	0	1	2	3	4	5	6	7	8	9	...	490	491	492	
Page total likes	139441	139441	139441	139441	139441	139441	139441	139441	139441	139441	...	85979	85979	85979	8
Type	Photo	Status	Photo	Photo	Photo	Status	Photo	Photo	Status	Photo	...	Photo	Photo	Link	F
Category	2	2	3	2	2	2	3	3	2	3	...	3	3	1	
Post Month	12	12	12	12	12	12	12	12	12	12	...	1	1	1	
Post Weekday	4	3	3	2	2	1	1	7	7	6	...	6	6	5	
Post Hour	3	10	3	10	3	9	3	9	3	10	...	11	3	11	
Paid	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	...	0.0	1.0	0.0	
Lifetime Post Total Reach	2752	10460	2413	50128	7244	10472	11692	13720	11844	4694	...	5280	6184	45920	
Lifetime Post Total Impressions	5091	19057	4373	87991	13594	20849	19479	24137	22538	8668	...	8703	10228	5808	1
Lifetime Engaged Users	178	1457	177	2211	671	1191	481	537	1530	280	...	951	956	753	
Lifetime Post Consumers	109	1361	113	790	410	1073	265	232	1407	183	...	911	901	655	
Lifetime Post Consumptions	159	1674	154	1119	580	1389	364	305	1692	250	...	1237	1140	763	
Lifetime Post Impressions by people who have liked your Page	3078	11710	2812	61027	6228	16034	15432	19728	15220	4309	...	5757	6085	15766	
Lifetime Post reach by people who like your Page	1640	6112	1503	32048	3200	7852	9328	11056	7912	2324	...	3300	3502	10720	
Lifetime People who have liked your Page and engaged with your post	119	1108	132	1386	396	1016	379	422	1250	199	...	431	437	220	
comment	4	5	0	58	19	1	3	0	0	3	...	1	1	0	
like	79.0	130.0	66.0	1572.0	325.0	152.0	249.0	325.0	161.0	113.0	...	79.0	105.0	128.0	1
share	17.0	29.0	14.0	147.0	49.0	33.0	27.0	14.0	31.0	26.0	...	30.0	46.0	9.0	
Total Interactions	100	164	80	1777	393	186	279	339	192	142	...	110	152	137	

19 rows × 500 columns

In [14]:
```
df1.transpose()
```

Out[14]:

	1	2	3	4	5	6	7	8	9	10	...	236	237	238	239	240	
Category	2	3	2	2	2	3	3	2	3	2	...	3	2	1	2	3	
Lifetime Post Total Reach	10460	2413	50128	7244	10472	11692	13720	11844	4694	21744	...	10888	3594	3384	4096	19968	4
Type	Status	Photo	Photo	Photo	Status	Photo	Photo	Status	Photo	Status	...	Photo	Photo	Photo	Photo	Photo	Pl
Total Interactions	164	80	1777	393	186	279	339	192	142	252	...	294	139	128	186	624	

4 rows × 245 columns

In [15]:
```
df2.transpose()
```

Out[15]:

	246	247	248	249	250	251	252	253	254	255	...	490	491	492	493	494	495	496	497	498	499
Post Month	7	7	7	7	7	7	7	7	7	7	...	1	1	1	1	1	1	1	1	1	1
Post Weekday	2	1	1	7	7	6	6	5	5	4	...	6	6	5	1	7	7	5	5	4	4
Post Hour	8	12	6	11	6	11	5	12	3	12	...	11	3	11	2	10	2	8	2	11	4
Lifetime Post Consumers	503	482	512	444	570	740	646	2327	963	574	...	911	901	655	1111	756	708	508	572	574	524

4 rows × 254 columns

In [16]:
```
df.sort_index()
```

Out[16]:

	Page total likes	Type	Category	Post Month	Post Weekday	Post Hour	Paid	Lifetime Post Total Reach	Lifetime Post Total Impressions	Lifetime Engaged Users	Lifetime Post Consumers	Lifetime Post Consumptions	Imp b v li
0	139441	Photo	2	12	4	3	0.0	2752	5091	178	109	159	
1	139441	Status	2	12	3	10	0.0	10460	19057	1457	1361	1674	
2	139441	Photo	3	12	3	3	0.0	2413	4373	177	113	154	
3	139441	Photo	2	12	2	10	1.0	50128	87991	2211	790	1119	
4	139441	Photo	2	12	2	3	0.0	7244	13594	671	410	580	
...	...	...	...	...	...	...	...	...	...	...	...	...	
495	85093	Photo	3	1	7	2	0.0	4684	7536	733	708	985	
496	81370	Photo	2	1	5	8	0.0	3480	6229	537	508	687	
497	81370	Photo	1	1	5	2	0.0	3778	7216	625	572	795	
498	81370	Photo	3	1	4	11	0.0	4156	7564	626	574	832	
499	81370	Photo	2	1	4	4	NaN	4188	7292	564	524	743	

500 rows × 19 columns

In [ ]:
```

```