

25-07-2023

```
In [2]: import numpy as np  
import pandas as pd
```

```
In [21]: a=pd.read_csv(r"C:\Users\user\Downloads\5_Instagram data.csv")  
a
```

Out[21]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	Follows	Caption
0	3920	2586	1028	619	56	98	9	5	162	35	2	Here are some of the most important data visua... #finance💎#money💎#
1	5394	2727	1838	1174	78	194	7	14	224	48	10	Here are some of the best data science project... #healthcare💎#health
2	4021	2085	1188	0	533	41	11	1	131	62	12	Learn how to train a machine learning model an... #data💎#datascien
3	4528	2700	621	932	73	172	10	7	213	23	8	Here💎s how you can write a Python program to d... #python💎#pythonpro
4	2518	1704	255	279	37	96	5	4	123	8	0	Plotting annotations while visualizing your da... #datavisualization
...
114	13700	5185	3041	5352	77	573	2	38	373	73	80	Here are some of the best data science certifi... #datascience💎#d
115	5731	1923	1368	2266	65	135	4	1	148	20	18	Clustering is a machine learning technique use... #machinelearning

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	Follows	Caption
116	4139	1133	1538	1367	33	36	0	1	92	34	10	Clustering music genres is a task of grouping ... #machinelearning
117	32695	11815	3147	17414	170	1095	2	75	549	148	214	Here are some of the best data science certifi... #datascience
118	36919	13473	4176	16444	2547	653	5	26	443	611	228	175 Python Projects with Source Code solved an... #python#pythonpro

119 rows × 13 columns

In [22]: a.sum()

```
Out[22]: Impressions      678775
From Home      294619
From Hashtags  224614
From Explore   128294
From Other     20360
Saves          18244
Comments       793
Shares         1114
Likes          20680
Profile Visits 6024
Follows        2470
Caption        Here are some of the most important data visua...
Hashtags       #finance#money#business#investing#investme...
dtype: object
```

```
In [23]: a.mean()
```

```
Out[23]: Impressions      5703.991597
          From Home       2475.789916
          From Hashtags   1887.512605
          From Explore    1078.100840
          From Other      171.092437
          Saves           153.310924
          Comments        6.663866
          Shares          9.361345
          Likes           173.781513
          Profile Visits  50.621849
          Follows         20.756303
          dtype: float64
```

```
In [24]: a.mean()
```

```
Out[24]: Impressions      5703.991597
          From Home       2475.789916
          From Hashtags   1887.512605
          From Explore    1078.100840
          From Other      171.092437
          Saves           153.310924
          Comments        6.663866
          Shares          9.361345
          Likes           173.781513
          Profile Visits  50.621849
          Follows         20.756303
          dtype: float64
```

```
In [25]: a.count()
```

```
Out[25]: Impressions      119
          From Home       119
          From Hashtags   119
          From Explore     119
          From Other       119
          Saves            119
          Comments        119
          Shares          119
          Likes           119
          Profile Visits   119
          Follows         119
          Caption         119
          Hashtags        119
          dtype: int64
```

```
In [26]: a.describe()
```

```
Out[26]:
```

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profi Visi
count	119.000000	119.000000	119.000000	119.000000	119.000000	119.000000	119.000000	119.000000	119.000000	119.000000
mean	5703.991597	2475.789916	1887.512605	1078.100840	171.092437	153.310924	6.663866	9.361345	173.781513	50.621840
std	4843.780105	1489.386348	1884.361443	2613.026132	289.431031	156.317731	3.544576	10.089205	82.378947	87.088400
min	1941.000000	1133.000000	116.000000	0.000000	9.000000	22.000000	0.000000	0.000000	72.000000	4.000000
25%	3467.000000	1945.000000	726.000000	157.500000	38.000000	65.000000	4.000000	3.000000	121.500000	15.000000
50%	4289.000000	2207.000000	1278.000000	326.000000	74.000000	109.000000	6.000000	6.000000	151.000000	23.000000
75%	6138.000000	2602.500000	2363.500000	689.500000	196.000000	169.000000	8.000000	13.500000	204.000000	42.000000
max	36919.000000	13473.000000	11817.000000	17414.000000	2547.000000	1095.000000	19.000000	75.000000	549.000000	611.000000

In [27]: `a.mode()`

Out[27]:

[illegible]


```
In [28]: a.cumsum()
```

Out[28]:

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	Follows	Caption
0	3920	2586	1028	619	56	98	9	5	162	35	2	Here are some of the most important data visua... #finance💎#money💎#
1	9314	5313	2866	1793	134	292	16	19	386	83	12	Here are some of the most important data visua... #finance💎#money💎#
2	13335	7398	4054	1793	667	333	27	20	517	145	24	Here are some of the most important data visua... #finance💎#money💎#
3	17863	10098	4675	2725	740	505	37	27	730	168	32	Here are some of the most important data visua... #finance💎#money💎#
4	20381	11802	4930	3004	777	601	42	31	853	176	32	Here are some of the most important data visua... #finance💎#money💎#
...
114	599291	266275	214385	90803	17545	16325	782	1011	19448	5211	2000	Here are some of the most important data visua... #finance💎#money💎#

	Impressions	From Home	From Hashtags	From Explore	From Other	Saves	Comments	Shares	Likes	Profile Visits	Follows	Caption
115	605022	268198	215753	93069	17610	16460	786	1012	19596	5231	2018	Here are some of the most important data visua... #finance💎#money💎#
116	609161	269331	217291	94436	17643	16496	786	1013	19688	5265	2028	Here are some of the most important data visua... #finance💎#money💎#
117	641856	281146	220438	111850	17813	17591	788	1088	20237	5413	2242	Here are some of the most important data visua... #finance💎#money💎#
118	678775	294619	224614	128294	20360	18244	793	1114	20680	6024	2470	Here are some of the most important data visua... #finance💎#money💎#

119 rows × 13 columns

```
In [29]: a.min()
```

```
Out[29]: Impressions                1941
          From Home                  1133
          From Hashtags              116
          From Explore                0
          From Other                  9
          Saves                      22
          Comments                   0
          Shares                     0
          Likes                      72
          Profile Visits              4
          Follows                    0
          Caption                    170 Python Projects with Source Code solved an...
          Hashtags                   #career?#job?#jobs?#jobsearch?#education?#busi...
          dtype: object
```

```
In [30]: a.max()
```

```
Out[30]: Impressions                36919
          From Home                  13473
          From Hashtags              11817
          From Explore               17414
          From Other                 2547
          Saves                     1095
          Comments                   19
          Shares                     75
          Likes                      549
          Profile Visits             611
          Follows                    260
          Caption                    You must have seen the news divided into categ...
          Hashtags                   #timeseries?#time?#statistics?#datascience?#bi...
          dtype: object
```

```
In [31]: from numpy import cov
```

```
In [35]: cov(a['Saves'],a['Follows'])
```

```
Out[35]: array([[24435.23301524,  4020.1187865 ],
                 [ 4020.1187865 , 1674.57570147]])
```

```
In [36]: from scipy.stats import pearsonr  
pearsonr(a['Comments'],a['From Other'])
```

```
Out[36]: (-0.10870297342228752, 0.23928188331583777)
```

```
In [37]: from scipy.stats import spearmanr  
spearmanr(a['Likes'],a['Saves'])
```

```
Out[37]: SpearmanrResult(correlation=0.8497029641436644, pvalue=2.5901422697787526e-34)
```

```
In [ ]:
```