

Pyhon Ex3 - Danit Noa Yechezkel, Keren Halpert

TASK 1:

2.

- **Ordinal:**
 - gen (2 < 3 < 4)
 - speed (low < medium < high)
 - sim (single < dual)
 - cores (single < dual < triple < quad < penta < hexa < hepta < octa)
 - wifi (none < b < a < g < n)
- **Nominal:**
 - bluetooth (yes / no)
 - screen (touch / LCD)

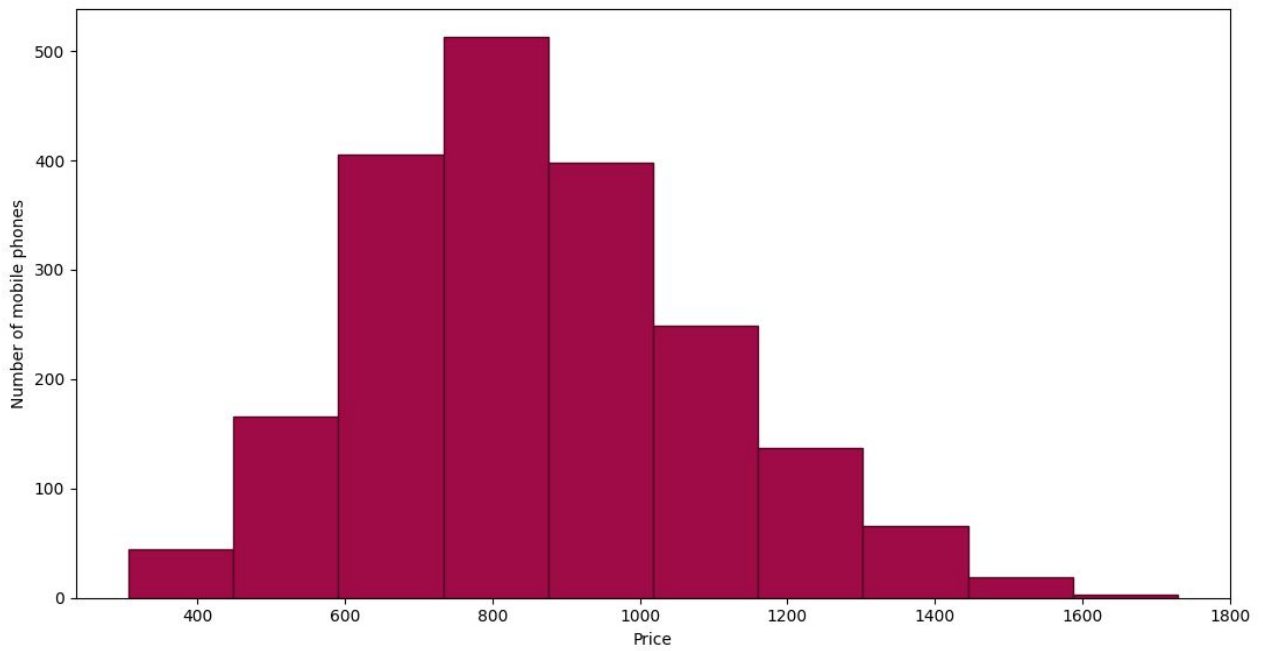
7.

	battery_power	m_dep	mobile_wt	px_height	px_width	ram
count	2000	2000	2000	2000	2000	2000
mean	1238.5185	0.50175	140.249	645.108	1251.5155	2124.213
std	439.4182061	0.28841555	35.3996549	443.7808108	432.1994469	1084.732044
min	501	0.1	80	0	500	256
25%	851.75	0.2	109	282.75	874.75	1207.5
50%	1226	0.5	141	564	1247	2146.5
75%	1615.25	0.8	170	947.25	1633	3064.5
max	1998	1	200	1960	1998	3998

	sc_h	sc_w	talk_time	gen	f_camera	camera
count	2000	2000	2000	2000	1526	1899
mean	12.3065	5.767	11.011	3.283	5.648099607	10.44391785
std	4.213245004	4.356397606	5.463955198	0.824773378	4.140169434	5.763826426
min	5	0	2	2	1	1
25%	9	2	6	3	2	6
50%	12	5	11	4	5	10
75%	16	9	16	4	8	15
max	19	18	20	4	19	20

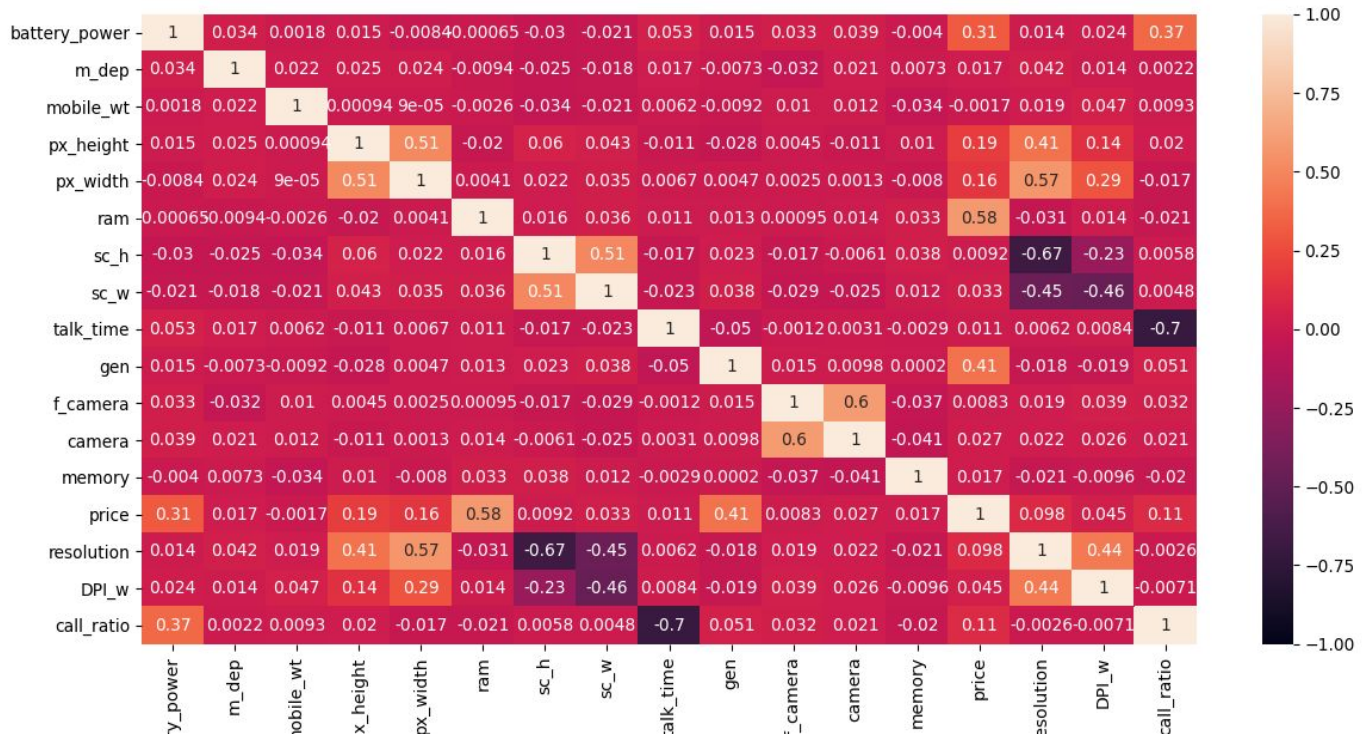
	memory	price	resolution	DPI_w	call_ratio
count	2000	2000	2000	2000	2000
mean	32.546085	862.02435	308.099855	847.3709	166.672675
std	18.16139281	230.2634804	183.4620859	983.7322399	156.6649214
min	1.95	307.11	56.42	0	25.1
25%	16.425	698.4675	179.825	269.015	75.7375
50%	32.305	837.63	261.965	490.84	111.37
75%	48.34	1006.7125	380.815	1002.505	186.19
max	64.92	1728.97	1253.4	5057.14	989.5

8.



Task 2 :

1.



2.

The features that have correlation, are the results that are farther than 0. The values that are closer to 1 or -1. Such as:

Battery_power with 0.31

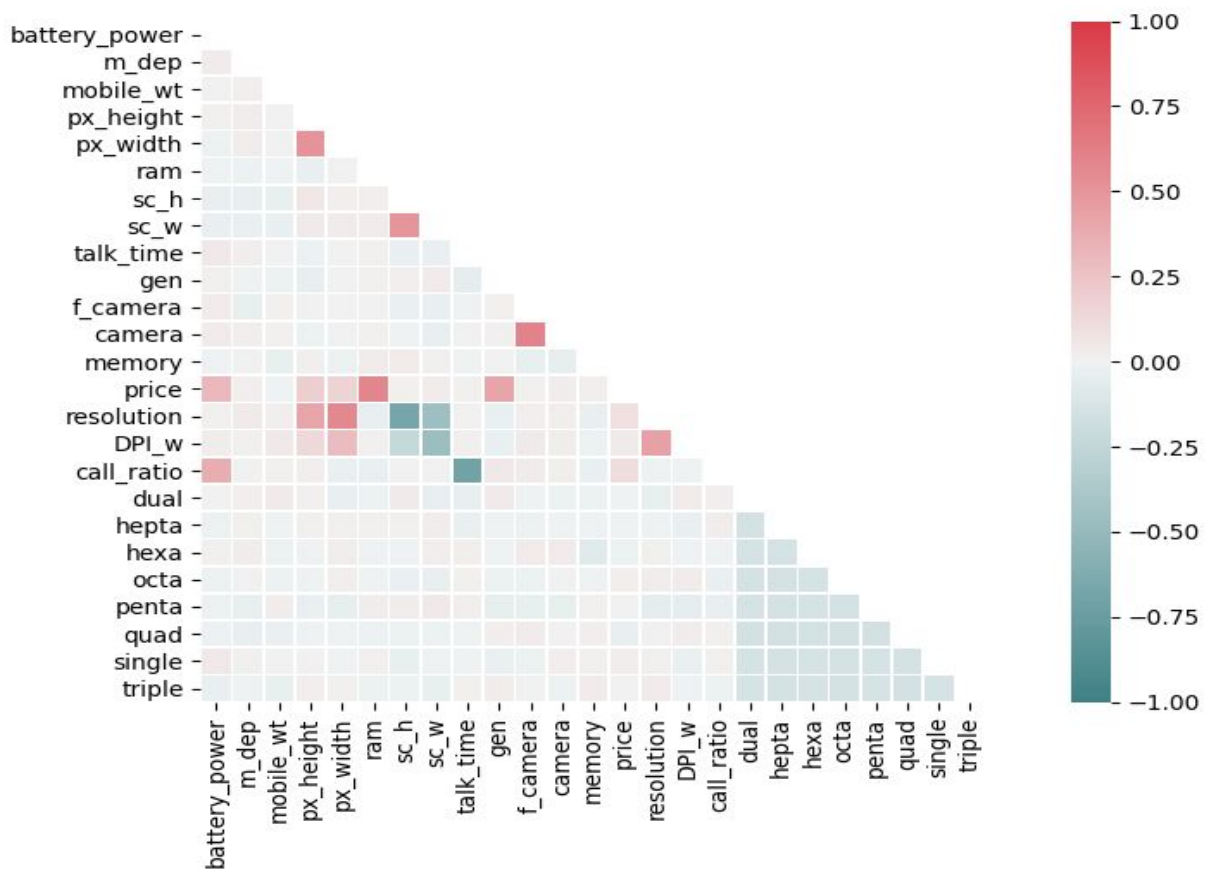
Ram with 0.58

Gen 0.41.

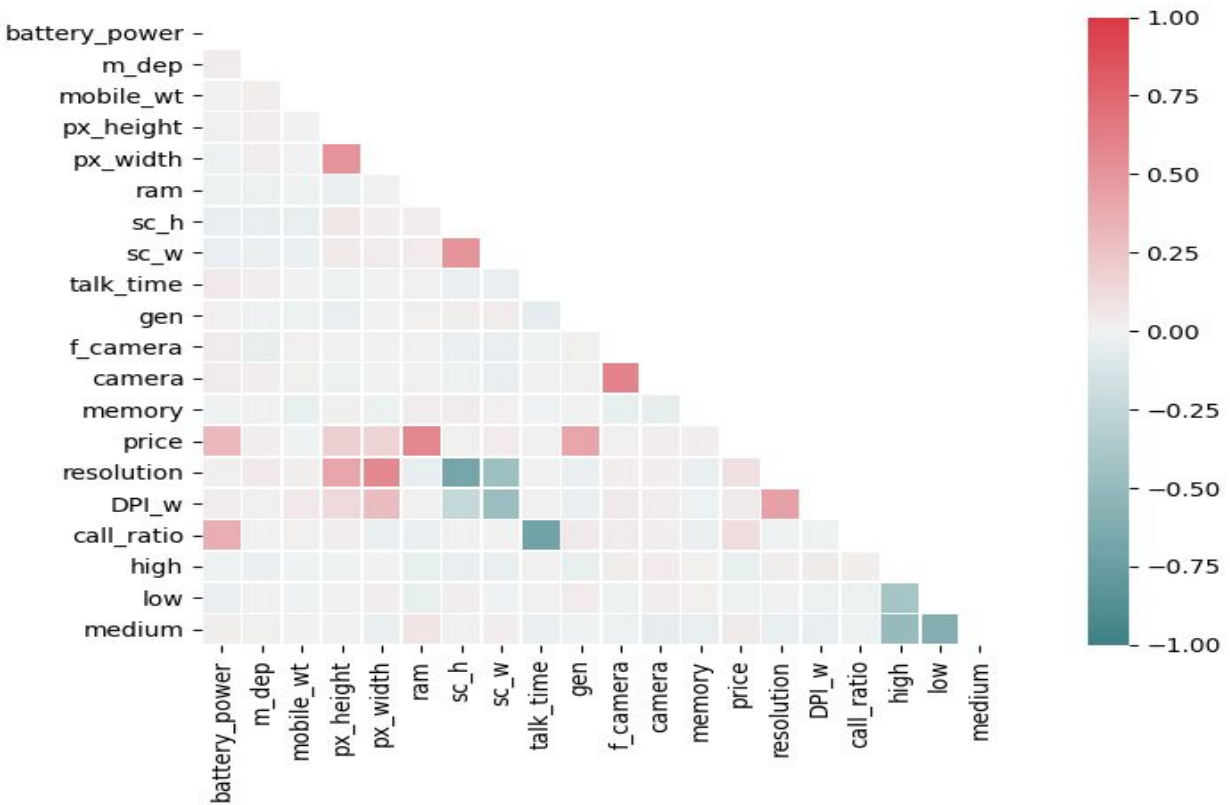
3. The features that are not shown in the correlation matrix:

- **Ordinal**

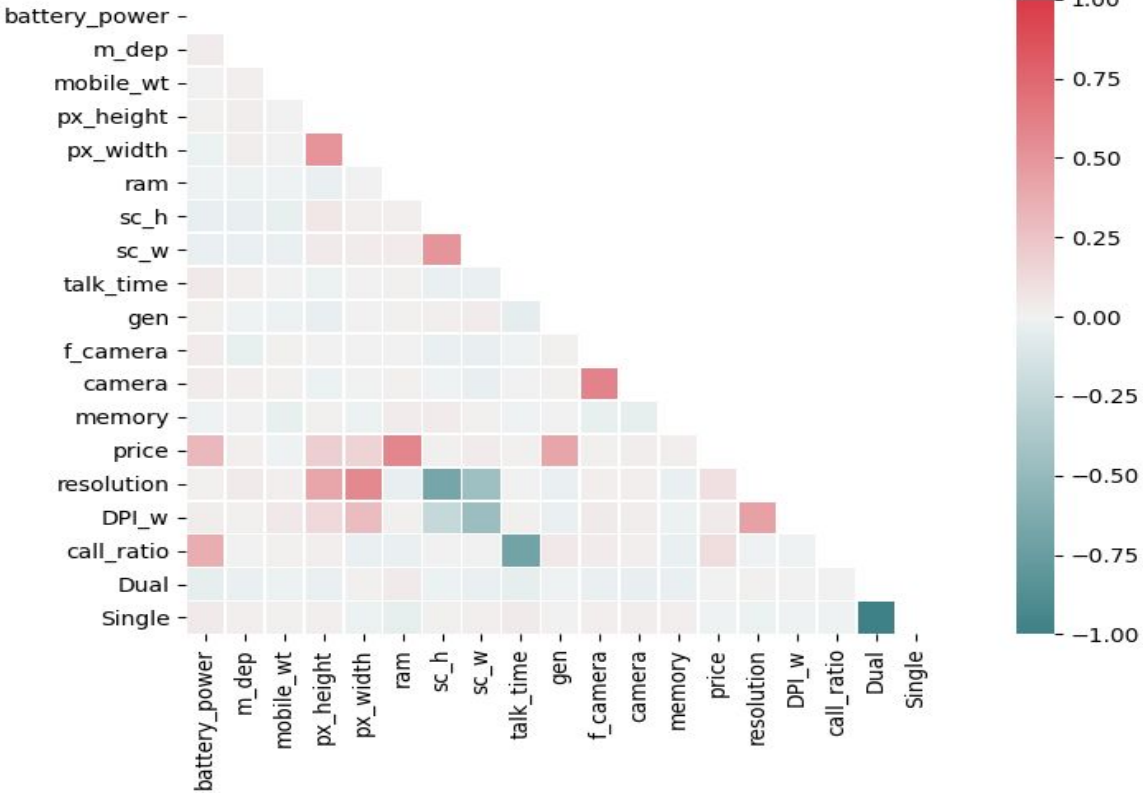
Cores- no correlation, around a value of 0 between there is little to no relationship between the variables



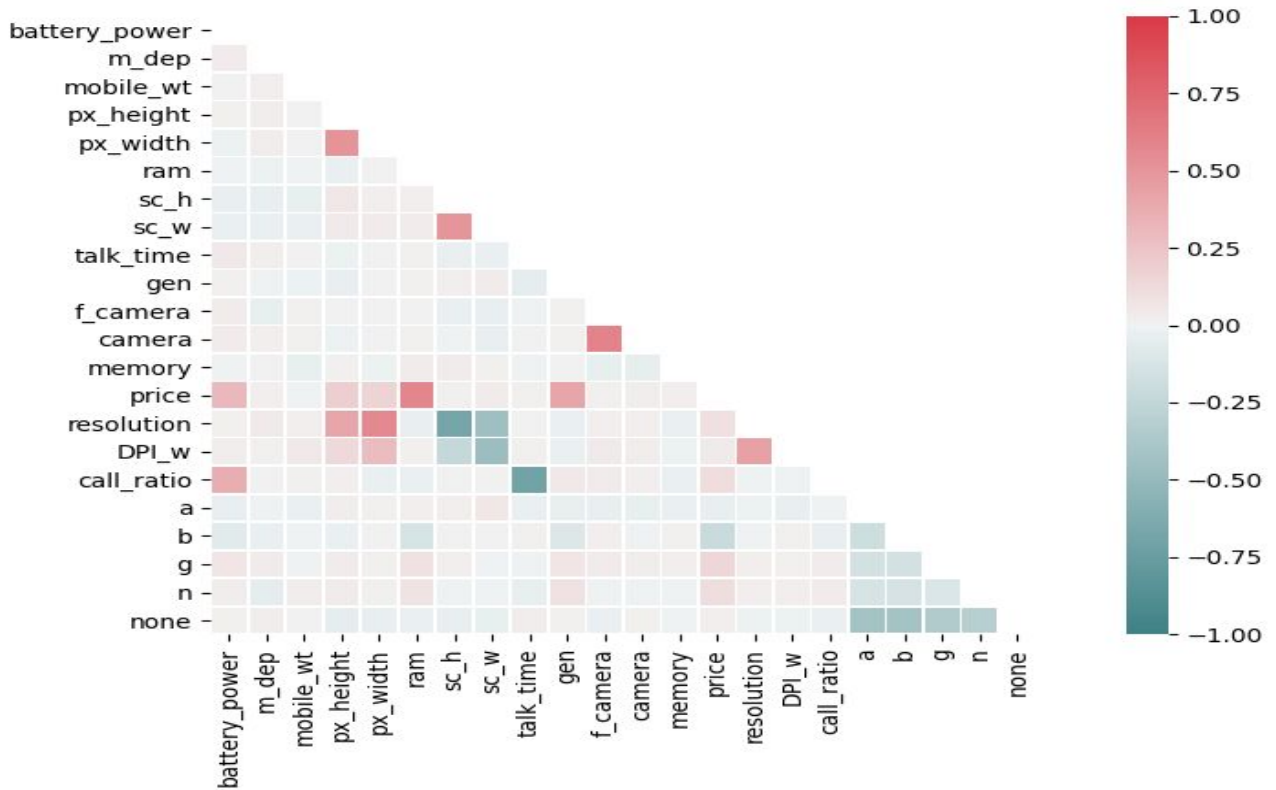
Speed- no correlation, around a value of 0 between there is little to no relationship between the variables



Sim- no correlation, around a value of 0 between there is little to no relationship between the variables

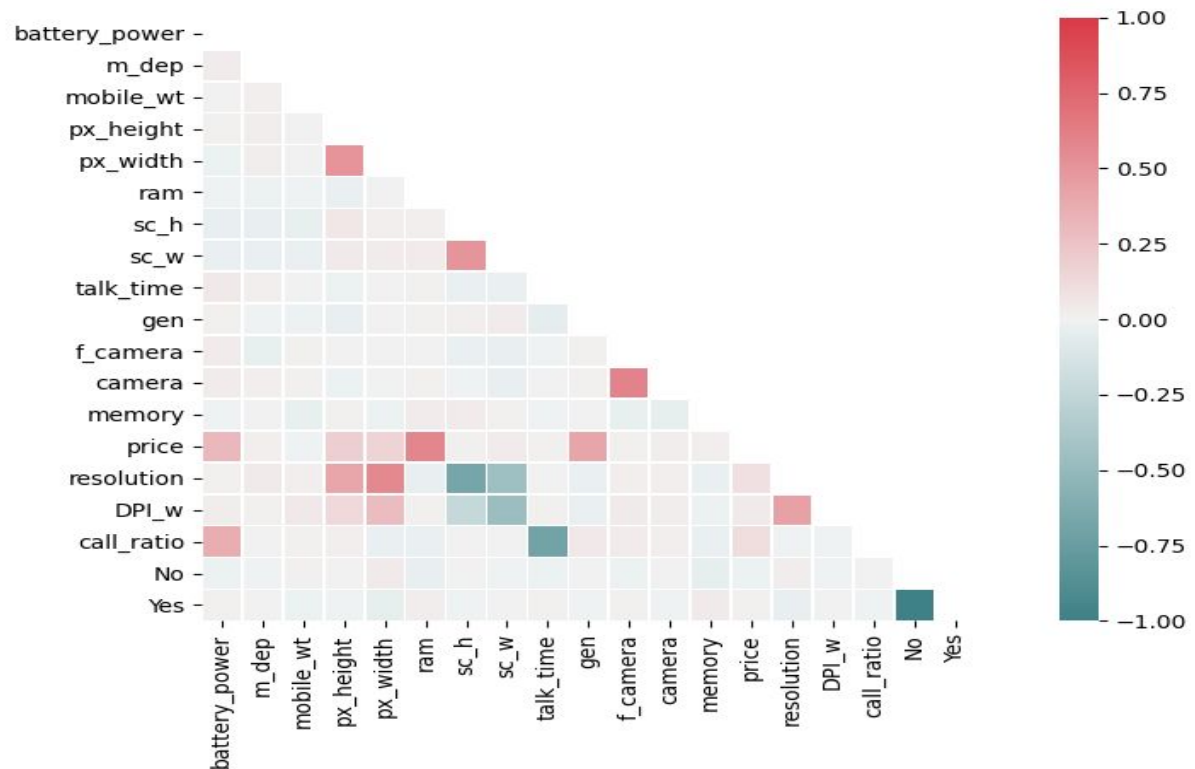


wifi - no correlation, around a value of 0 between there is little to no relationship between the variables

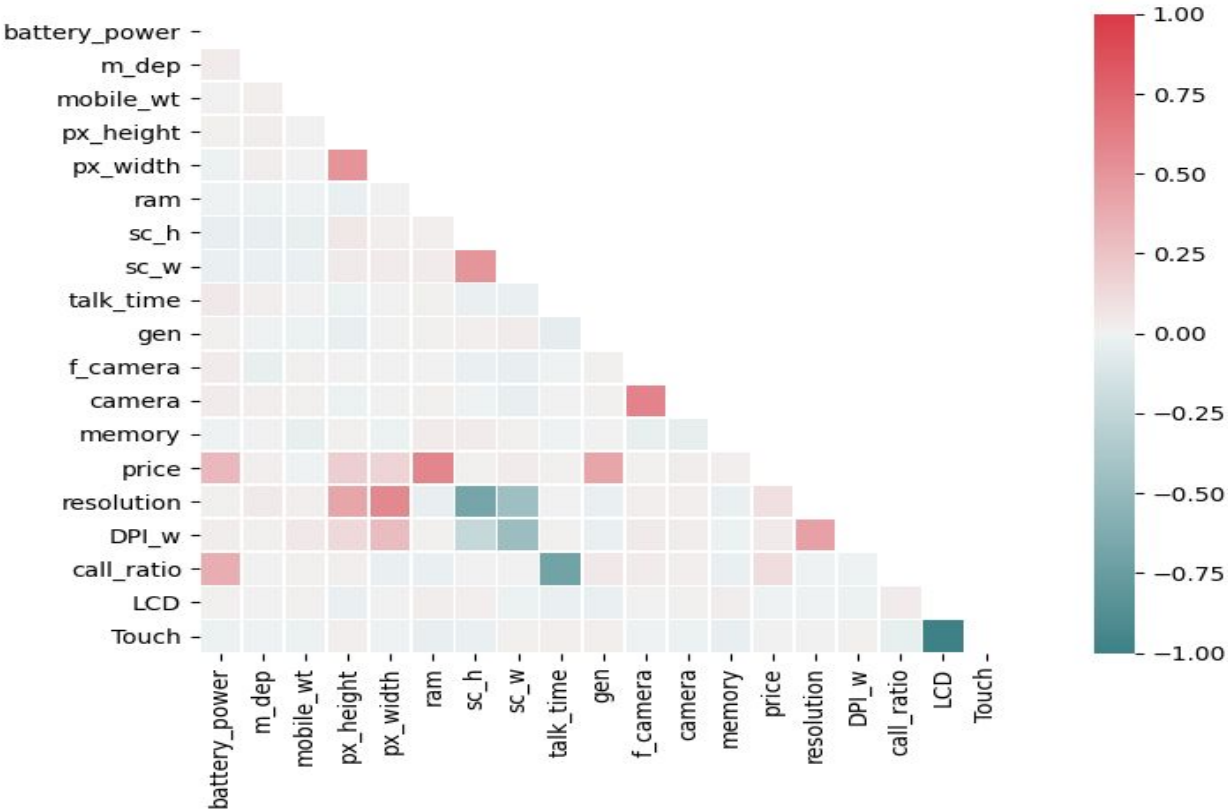


- **Nominal:**

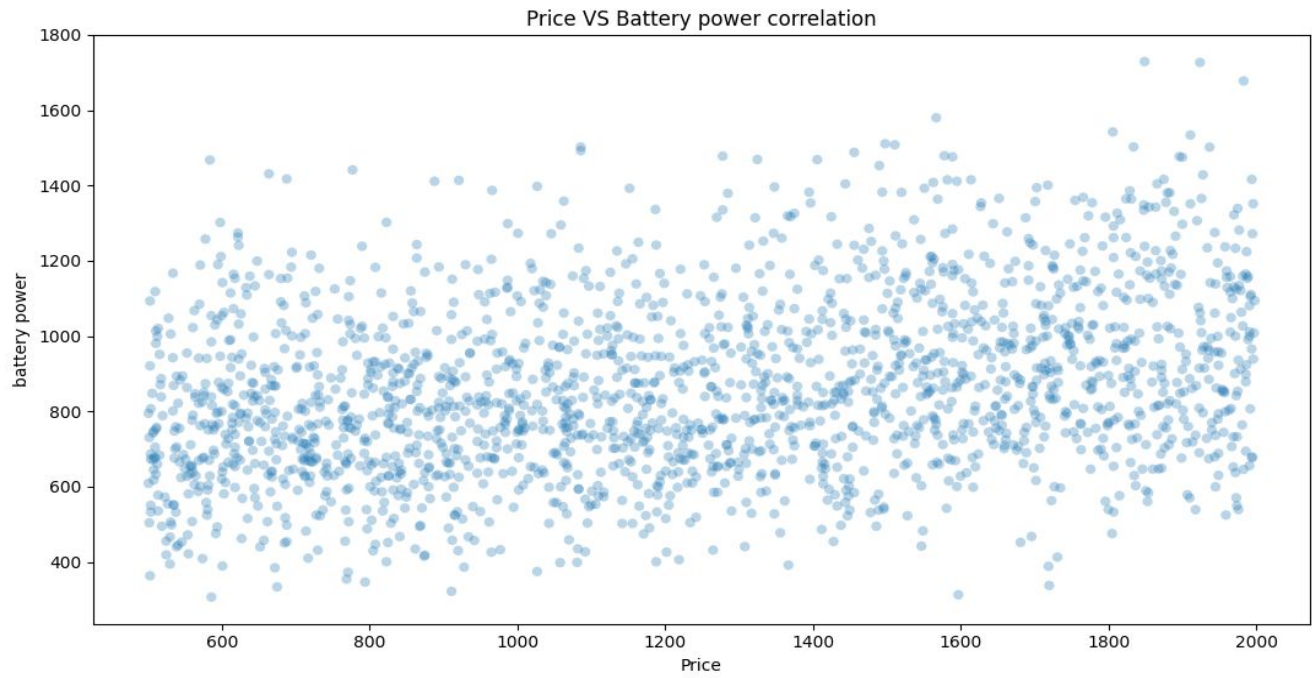
Bluetooth- no correlation, around a value of 0 between there is little to no relationship between the variables



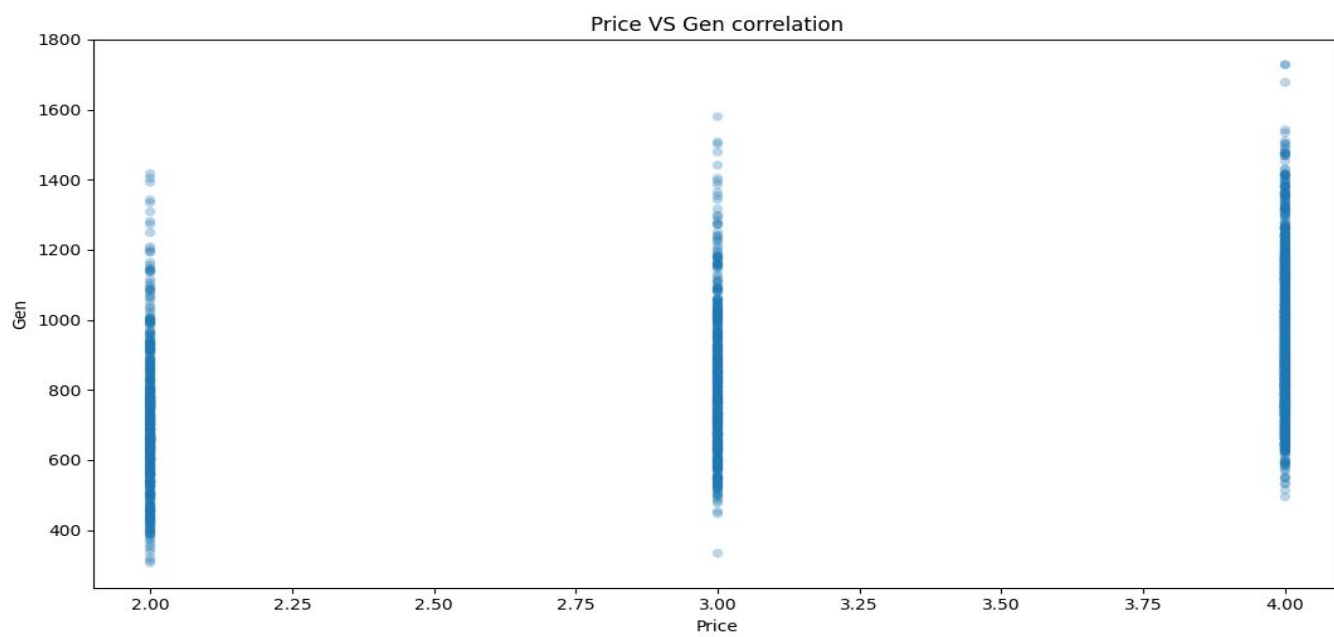
screen- no correlation, around a value of 0 between there is little to no relationship between the variables



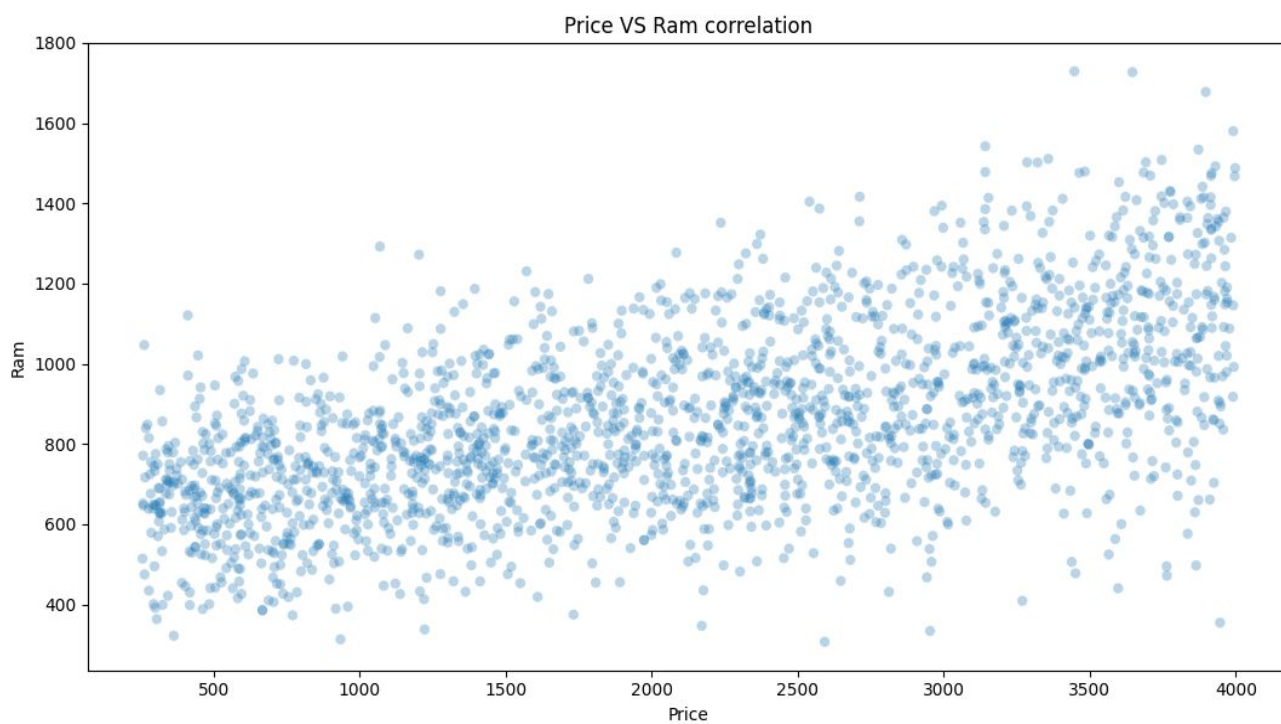
4 Price VS Battery power correlation



Price VS gen correlation



Price VS ram correlation

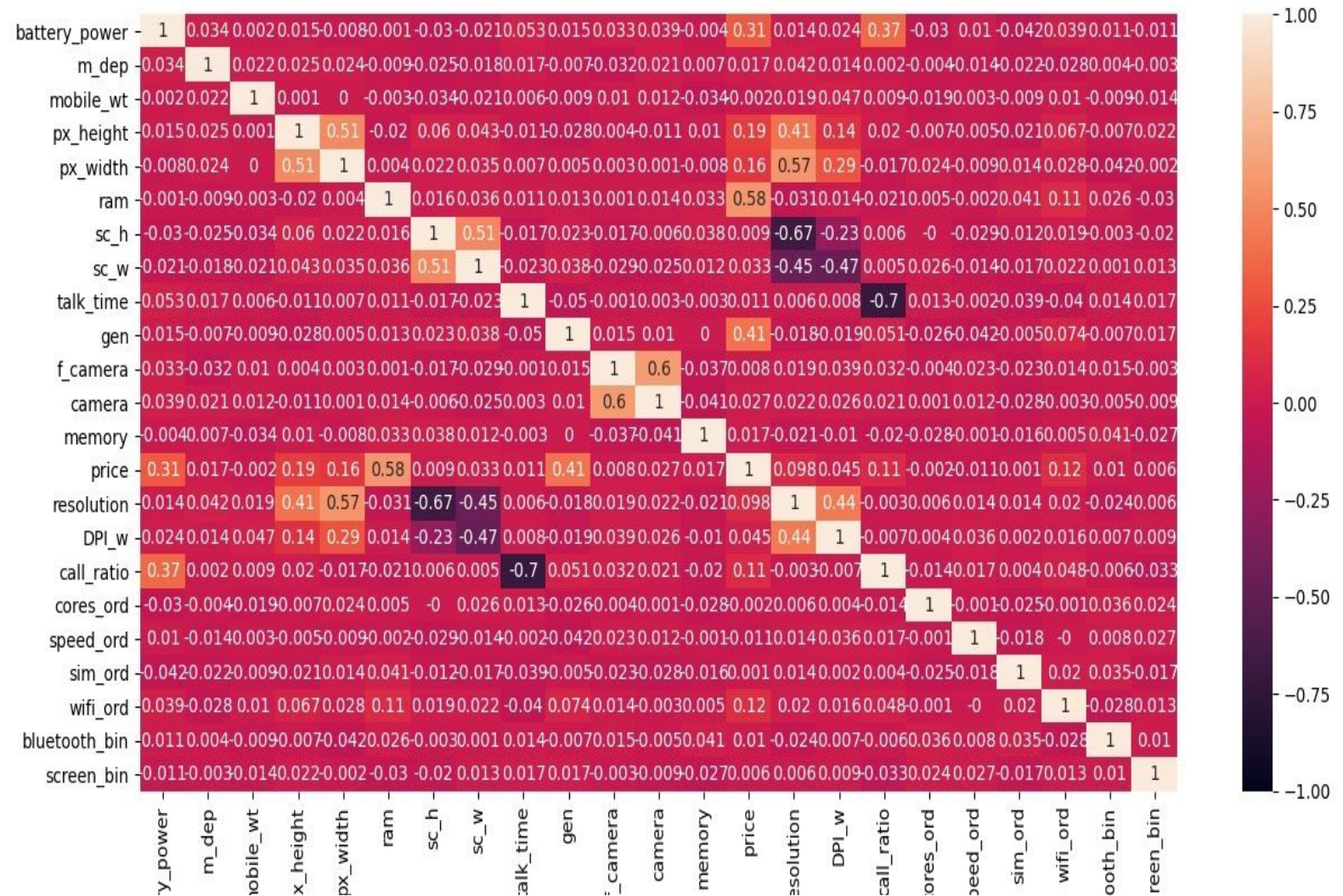


5.

gen		2	3	4
ram	battery_power			
(0, 1000]	(500, 1000]	457.528485	579.106429	689.429143
	(1000, 1500]	544.807949	636.627353	756.193824
(1000, 2000]	(500, 1000]	594.745714	701.375405	782.041310
	(1000, 1500]	663.373000	739.047111	885.947283
(2000, 3000]	(500, 1000]	654.600217	761.557455	897.150087
	(1000, 1500]	716.845238	840.719545	951.964737
(3000, 4000]	(500, 1000]	809.426190	937.270851	1027.393187
	(1000, 1500]	888.100250	1021.071351	1142.944881

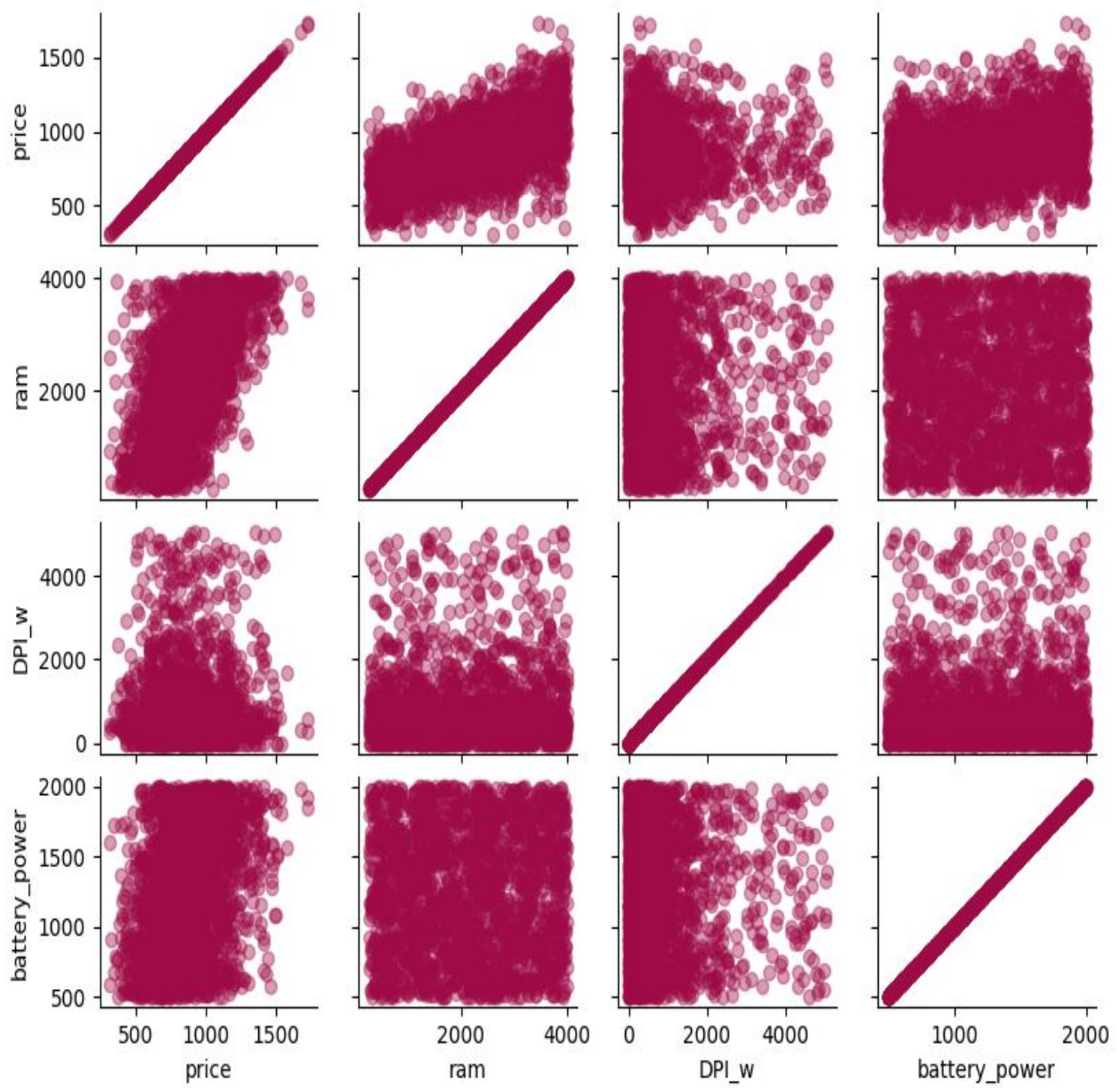
Task 3 :

3.

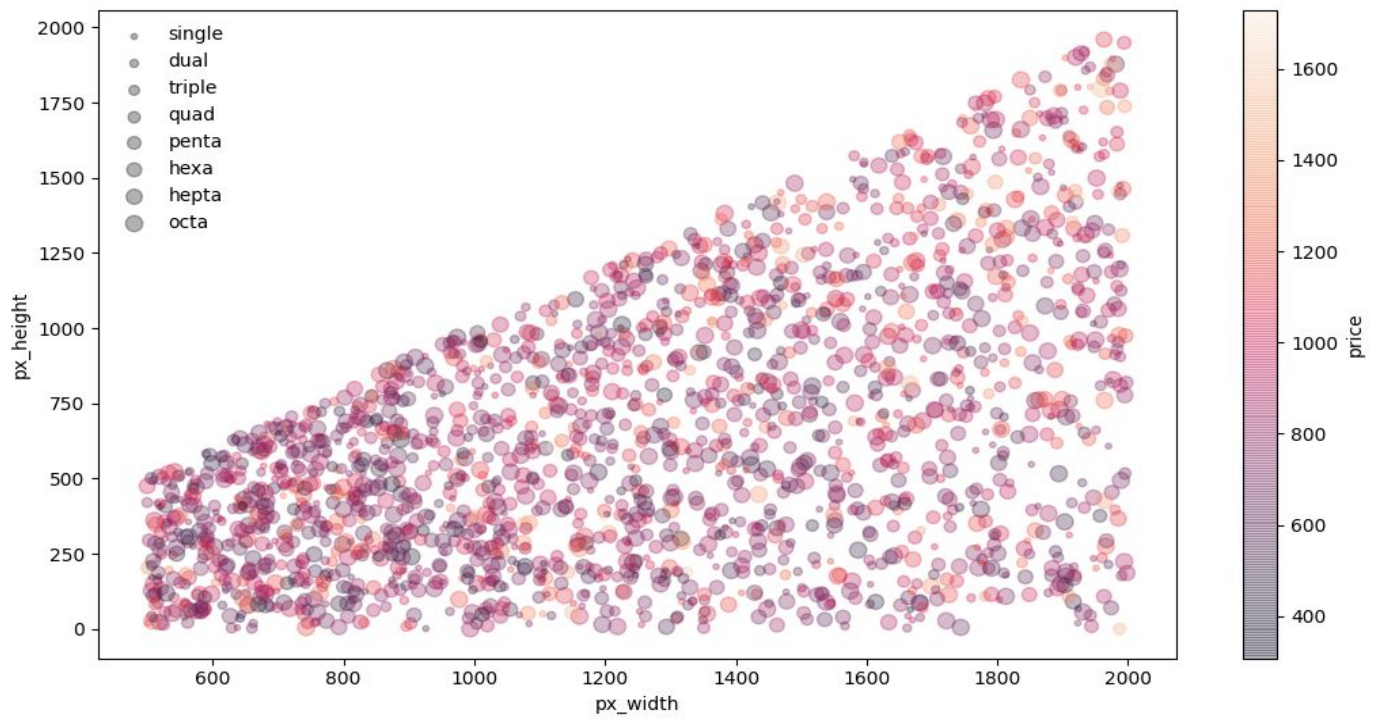


Task 4 :

1.



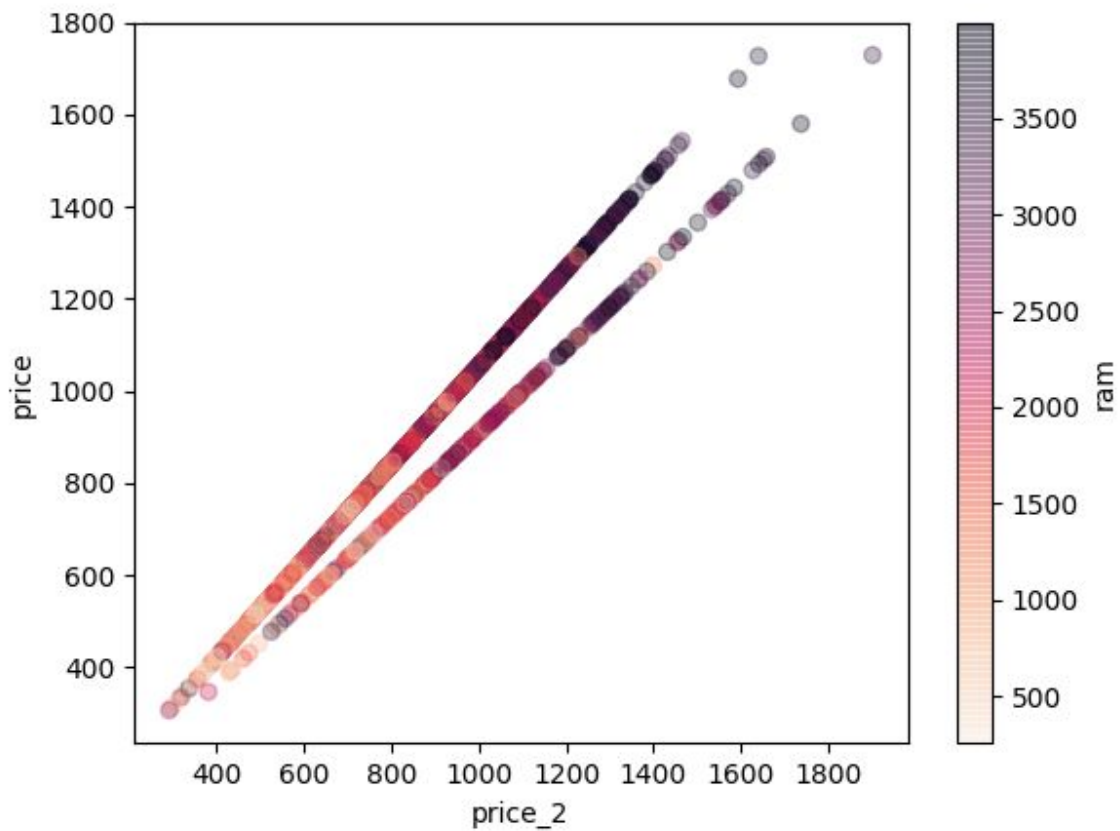
2.



3. Of the three features most correlated with the transformation of the price, the one feature that corresponds most is the ram feature.



since the ram feature is the most correlated with the price, here we show the relation between them



These graphs display the difference between the scattering of the two prices. the first price is more diverse and spread among more values, the second one is more condensed

