

Bank Marketing Data Analysis

Uni-variate Analysis:

	Age	Duration	Campaign	Pdays	Previous	EVR	CPI	CFI	Euribor	Employed
Mean	40.02	258.29	2.57	962.48	0.17	0.08	93.58	-40.50	3.62	5167.04
Stand Error	0.05	1.28	0.01	0.92	0.00	0.01	0.00	0.02	0.01	0.36
Median	38.00	180	2	999	0	1.1	93.75	-41.80	4.857	5191
Mode	31.00	85	1	999	0	1.4	93.99	-36.40	4.857	5228.1
Stand Dev	10.42	259.28	2.77	186.91	0.49	1.57	0.58	4.63	1.73	72.25
Sample Var	108.60	67225.73	7.67	34935.69	0.24	2.47	0.34	21.42	3.01	5220.28
Kurtosis	0.79	20.25	36.98	22.23	20.11	-1.06	-0.83	-0.36	-1.41	0.00
Skewness	0.78	3.26	4.76	-4.92	3.83	-0.72	-0.23	0.30	-0.71	-1.04
Range	81.00	4918	55	999	7	4.8	2.57	23.9	4.41	264.5
Minimum	17.00	0	1	0	0	-3.4	92.20	-50.8	0.63	4963.6
Maximum	98.00	4918	56	999	7	1.4	94.77	-26.9	5.05	5228.1
Sum	1648455.00	10638243	105754	39642439	7124	3372.7	3854194.46	1668221.10	149153.73	212819875.1
Count	41187.00	41188	41188	41188	41188	41188	41188	41188	41188	41188

In the Age Analysis, the average age of the people is 40, and most of the people are of 31 age with a standard deviation of 10.42 which shows majorly people are between the age of 30 to 50. This age group of people are earning empowered and may want to invest in term deposits for different future financial goals.

In the Duration Analysis, the average call duration is of 258 sec but most of the calls took around 85 sec. The call duration varies a lot from a few sec to around 517 sec which due to the availability of time with the clients. Some of the calls have taken around 4918 sec which shows that they were very interested and wanted to know more details regarding the term deposit.

In the Campaign Analysis, the average call made to the client was around 2.57. The highest attempt of call is 1 which shows for every potential client was called up and many clients are even called for 56 times.

In the Passed day Analysis, the average number of days from the previous campaign was 962 which is around 2.5 years later. Most of the clients are called up around 3 years later from the previous campaign.

Bi-variate Analysis:

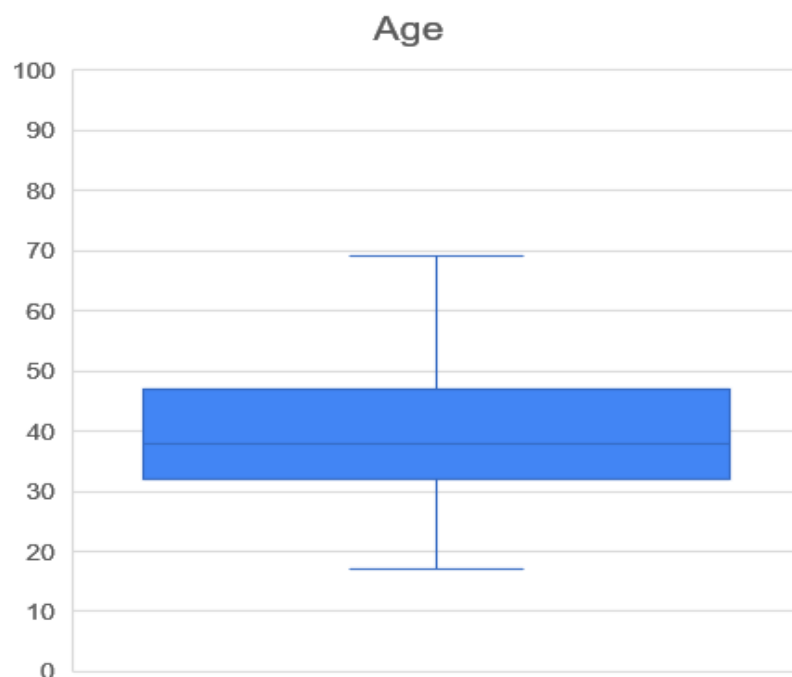
	Age	Duration	Campaign	Pdays	Previous	EVR	CPI	CFI	Euribor	Employed
Age	1.00									
Duration	0.00	1.00								
Campaign	0.00	-0.07	1.00							
Pdays	-0.03	-0.05	0.05	1.00						
Previous	0.02	0.02	-0.08	-0.59	1.00					
EVR	0.00	-0.03	0.15	0.27	-0.42	1.00				
CPI	0.00	0.01	0.13	0.08	-0.20	0.78	1.00			
CFI	0.13	-0.01	-0.01	-0.09	-0.05	0.20	0.06	1.00		
Euribor	0.01	-0.03	0.14	0.30	-0.45	0.97	0.69	0.28	1.00	
Employed	0.02	-0.04	0.14	0.37	-0.50	0.91	0.52	0.10	0.95	1.00

From the above correlation table Analysis, the Employee variation rate is positively correlated to the consumer price index, Euribor rate, and No. of Employed.

No. of Employed is negatively correlated to the Previous performed contacts, which shows more call was performed when the no. of employees are less.

The campaign is less positively correlated to the Euribor rate & no. of employed, which indicates that more call attempts are made when the Euribor rate & No.of Employed people are High.

Boxplot:



In the above Boxplot, outliers are removed which were all above the age of 70, from the above plot we can see the minimum age of the people is 17 and the maximum is 69. Most of the people are in the range of 33 to 57 with a median age of 38. From this we can conclude that most of the people called up are the age of around 40 years.

Note:

Please note all the charts are made in excel.