

Descriptive statistics 30x30 DataFrame(df)

col	mean	median	variance	stdev	kurtosis	skewness	min	max	quant (95%)
1	-0.00432	0.06968	0.87063	0.93308	-0.43662	-0.06783	-1.86106	1.86246	1.50809
2	0.08182	0.1789	1.09399	1.04594	-0.15581	0.1314	-1.82178	2.72089	1.51449
3	-0.08855	-0.2015	1.26436	1.12444	-0.98299	-0.15821	-2.41235	1.75877	1.48694
4	0.18255	0.3956	0.5493	0.74115	-0.19888	-0.39664	-1.53685	1.54282	1.36044
5	-0.01701	0.09952	0.80177	0.89542	-0.71741	-0.10157	-1.78584	1.65121	1.36579
6	-0.34032	-0.29792	1.06716	1.03303	-0.12686	0.26575	-2.35271	1.89695	1.59897
7	0.17517	0.08814	0.85974	0.92722	-0.52895	0.24932	-1.49359	2.247	1.67856
8	0.06944	-0.07485	1.0382	1.01892	-0.70487	0.41115	-1.53144	2.28979	1.75156
9	-0.02498	-0.03973	0.77187	0.87856	-0.35905	0.36778	-1.73333	2.12172	1.37197
10	-0.00279	-0.13558	1.01279	1.00638	0.13116	0.69552	-1.45435	2.79671	1.50517
11	-0.23339	-0.44141	1.16853	1.08099	0.08574	0.16743	-2.81663	2.35022	1.44027
12	-0.38318	-0.31432	0.56013	0.74842	0.43506	0.43346	-1.94093	1.5628	0.93098
13	-0.23551	-0.43684	1.10712	1.0522	0.26065	0.90533	-1.83181	2.50254	1.83266
14	0.03781	0.05456	0.88139	0.93882	-0.76818	-0.19598	-2.01687	1.55643	1.44328
15	0.08917	0.13119	0.84881	0.92131	0.67661	0.12608	-2.07405	2.61618	1.2946
16	-0.08417	-0.00516	1.08698	1.04258	-0.06489	-0.5633	-2.60008	1.97749	1.20867
17	-0.04155	-0.03377	0.91532	0.95672	0.08507	0.71034	-1.55968	2.4055	1.81173
18	0.06297	-0.06513	1.1593	1.07671	-0.30658	0.48075	-1.62864	2.76575	1.87221
19	0.01125	-0.16017	0.75004	0.86605	-0.51709	0.44472	-1.52524	1.88704	1.50178
20	-0.17478	0.06105	0.98176	0.99084	-0.57167	-0.25339	-2.31717	1.71292	1.33454
21	-0.0749	-0.2209	0.84052	0.9168	-0.8977	0.30273	-1.40671	1.93958	1.36109
22	0.1557	0.26476	0.78301	0.88488	-0.5729	-0.25039	-1.73446	1.78797	1.52428
23	-0.04634	0.16685	0.74344	0.86223	-0.22032	-0.48723	-1.94088	1.52288	1.19789
24	0.1329	0.07778	1.10538	1.05137	-1.0917	0.10675	-1.69188	2.09052	1.70166
25	0.18415	0.23506	0.87852	0.93729	0.12015	0.35871	-1.60057	2.29035	2.09486
26	-0.38087	-0.35414	0.93979	0.96943	-0.89195	0.03221	-2.35293	1.39163	1.20417
27	0.13641	0.15435	0.76456	0.87439	0.01392	-0.03504	-1.80625	2.10665	1.59663
28	-0.19613	-0.13642	1.37671	1.17333	-0.72985	0.01267	-2.78421	1.8795	1.86915
29	-0.12091	-0.10692	0.81988	0.90547	-0.10362	-0.20525	-2.3483	1.72227	1.28001
30	-0.48586	-0.69683	0.8503	0.92211	-0.42214	0.42464	-2.45416	1.44734	1.12534

Multivariate Normality test 30x30 DataFrame(df)

	t1	p-value (t1)	t2	p-value (t2)
mardia	3869.798	1.0	-8.83595	0.0
royston	23.62801	0.76523		
henze-zirkler	120.0	0.0		
doornik-hansen	nan	nan		
energy	2.843	nan		

Univariate Normality test 30x30 DataFrame(df)

col	jb	p-value (jb)	k2	p-value (k2)	ks	p-value (ks)	sw	p-value (sw)
1	0.2613	0.87752	0.06443	0.9683	0.14307	0.5342	0.96997	0.53832
2	0.11668	0.94333	0.20203	0.90392	0.12242	0.75267	0.97569	0.70318
3	1.33299	0.5135	2.45301	0.29332	0.14859	0.48309	0.96188	0.34566
4	0.83608	0.65834	1.08658	0.58083	0.20578	0.13653	0.96581	0.43172
5	0.69493	0.70648	0.6714	0.71484	0.08726	0.97634	0.9767	0.73277
6	0.37324	0.82976	0.58663	0.74579	0.24502	0.04519*	0.96888	0.50897
7	0.66054	0.71873	0.54946	0.75978	0.12725	0.69791	0.97861	0.78741
8	1.46626	0.4804	1.6658	0.43479	0.10916	0.86703	0.94913	0.16021
9	0.83745	0.65789	0.89757	0.6384	0.09289	0.95805	0.98045	0.83729
10	2.44022	0.2952	3.43041	0.17993	0.11021	0.85939	0.94825	0.1517
11	0.14936	0.92804	0.58461	0.74654	0.20936	0.12442	0.9834	0.90698
12	1.17604	0.55543	2.30072	0.31652	0.32244	0.00282**	0.97488	0.67923
13	4.18301	0.1235	5.40694	0.06697	0.27074	0.01965*	0.92561	0.03759*
14	0.92967	0.62824	1.07095	0.58539	0.0838	0.98437	0.97282	0.61892
15	0.65173	0.7219	1.73571	0.41985	0.11515	0.82118	0.9809	0.84897
16	1.59182	0.45117	2.19273	0.33408	0.12259	0.7508	0.95978	0.30579
17	2.53193	0.28197	3.46752	0.17662	0.17783	0.26639	0.94692	0.1397
18	1.27309	0.52912	1.49832	0.47276	0.09401	0.95362	0.96326	0.37422
19	1.32312	0.51604	1.40371	0.49566	0.1257	0.71525	0.95835	0.28096
20	0.72955	0.69435	0.63411	0.72829	0.12196	0.75802	0.97871	0.79028
21	1.46557	0.48057	2.17769	0.3366	0.10935	0.86569	0.95528	0.23354
22	0.72374	0.69637	0.62638	0.73111	0.13739	0.59009	0.98234	0.88379
23	1.24766	0.53589	1.57046	0.45601	0.11384	0.8317	0.96146	0.33747
24	1.54672	0.46146	3.6298	0.16285	0.12211	0.75636	0.96386	0.38719
25	0.66139	0.71842	1.30456	0.52086	0.14829	0.48573	0.9589	0.29029