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L A M P I R A N

Lampiran 1. Jarak Mahalanobis dan Nilai *Chi Square* Pada Data Penelitian

Mahalanobis	χ^2	Mahalanobis	χ^2	Mahalanobis	χ^2
84.8785	66.6543	97.4563	93.544	101.4918	105.6946
86.3585	71.0141	97.4703	93.8516	101.5574	106.0349
86.5137	73.3361	97.6669	94.1571	101.8451	106.3797
87.2554	74.9974	97.7392	94.4606	101.875	106.7291
88.9067	76.3188	98.1369	94.7625	101.9563	107.0837
89.6508	77.4303	98.2699	95.0628	102.0292	107.4437
90.0784	78.3984	98.3478	95.3617	102.1372	107.8094
90.3997	79.2617	98.4062	95.6594	102.3051	108.1813
90.4318	80.0449	98.5403	95.956	102.437	108.5599
90.7562	80.7648	98.5735	96.2517	102.8222	108.9456
91.5387	81.4332	98.6298	96.5466	102.8446	109.3389
91.8532	82.059	98.6395	96.8408	102.9072	109.7404
92.0637	82.649	98.7856	97.1345	103.3523	110.1506
92.4984	83.2082	98.8166	97.4279	103.3647	110.5704
93.1629	83.741	98.8767	97.721	103.3787	111.0005
93.3619	84.2506	98.8882	98.6139	103.4218	111.4417
93.4205	84.7399	99.3746	99.3069	103.479	111.8949
93.7551	85.2111	99.5022	99.601	103.51	112.3613
93.7887	85.6663	99.5137	99.6933	103.7278	112.842
94.1165	86.1069	99.6963	99.7171	103.747	113.3383
94.4298	86.5346	99.7744	99.7813	103.9113	113.852
94.4331	86.9505	99.8249	99.8762	103.9185	114.3847
95.1159	87.3556	100.0081	100.0719	104.0876	114.9385
95.3786	87.751	100.0592	100.3685	104.1985	115.5159
95.5032	88.1375	100.0816	100.6662	104.5763	116.1198
95.8164	88.5158	100.1393	100.965	104.6263	116.7535
96.0595	88.8866	100.1419	101.2651	104.8177	117.4213
96.1012	89.2504	100.1867	101.5667	105.1437	118.1281
96.188	89.6079	100.2011	101.8699	105.1595	118.8802
96.4064	89.9595	100.2522	102.1748	105.6466	119.6855
96.4071	90.3056	100.2553	102.4817	105.7424	120.5544
96.43	90.6468	100.3824	102.7906	106.1744	121.5001
96.4697	90.9832	100.4007	103.1018	106.8761	122.5413
96.6086	91.3154	100.4369	103.4154	107.2963	123.7039
96.9231	91.6435	100.8742	103.7316	107.4301	125.0267
97.1838	91.968	100.8939	104.0506	107.569	126.571
97.201	92.2891	100.9527	104.3725	109.5562	128.4434
97.2837	92.607	101.2416	104.6977	109.6745	130.8557
97.3444	92.9219	101.3537	105.0263	109.7315	134.3417
97.3463	93.2342	101.4167	105.3585	110.0471	141.2752

Lampiran 2. Korelasi Jarak Mahalanobis dan *Chi Square*

Correlations

		Jarak Mahalanobis	Chi Square
Jarak Mahalanobis	Pearson Correlation	1	.985**
	Sig. (2-tailed)		.000
	N	120	120
Chi Square	Pearson Correlation	.985**	1
	Sig. (2-tailed)	.000	
	N	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

Lampiran 3. Data Simulasi 2 Variabel

X_1	X_2
0.717314	0.764066
-0.40632	-0.4
0.349871	0.574038
0.303212	0.42663
-0.93153	-0.80579

Lampiran 4. Data Simulasi 5 Variabel

X_1	X_2	X_3	X_4	X_5
0.588929	0.388913	0.610824	0.832599	1.015647
1.276355	1.033031	1.528439	1.061282	1.52973
0.65088	0.250424	0.397833	0.579805	0.829152
0.180318	-0.37661	-0.29016	-0.51049	-0.10328
-0.82669	-0.72695	-0.39614	-0.04174	0.059637
0.353793	-0.28189	0.667474	0.0703	0.673853
1.852124	1.837719	1.789083	0.999343	1.322897
0.951424	-0.6442	1.2045	-0.06801	1.213875
0.949889	-0.02283	1.182306	-0.03332	0.920688
1.206249	-0.27221	1.008301	0.101912	1.099843

Lampiran 5. Data Simulasi 7 Variabel

X_1	X_2	X_3	X_4	X_5	X_6	X_7
2.404338	0.845785	0.936491	2.196386	2.287021	1.808266	1.850264
0.227639	0.318459	0.037631	0.529895	1.499788	0.66876	1.060622
1.203195	1.804796	0.806872	1.156279	1.559817	2.618773	1.703581
-0.4561	-1.08403	-1.54913	-0.79664	-0.43699	0.22777	-1.06895
0.792378	0.668867	0.430676	0.614197	1.34362	1.382359	0.732991
0.532764	0.463843	0.098873	0.425817	1.205946	1.283265	0.488609
0.095616	0.02543	-0.32	-0.21292	0.119401	0.663423	0.264175
0.40101	0.299451	-0.01406	0.420289	1.013982	0.821832	0.887188
0.550522	0.151831	-0.17405	0.190421	0.492415	1.053064	0.29652
0.728121	0.117967	0.352325	0.003885	0.288393	0.722246	0.150514
0.189583	-0.64505	-0.7363	-0.47573	-0.30001	0.465085	-0.69588
1.347698	0.837708	0.878625	0.758575	1.043794	1.506145	0.887895
-1.21656	-1.53039	-1.69916	-1.5205	-1.06451	-0.84523	-1.15819
-1.49795	-2.482	-2.37692	-2.04071	-1.75389	-1.54391	-2.08514
0.421976	-0.42736	-0.03307	-0.26891	0.39343	0.404757	-0.61827

Lampiran 6. Data Simulasi 10 Variabel

X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}
1.626909	1.184386	1.404092	0.178877	1.446887	0.492392	1.055786	1.016397	1.326555	1.00356
1.515921	1.998976	1.171485	0.389011	1.557583	0.549497	1.881032	1.16046	1.869439	0.656106
1.747831	1.21938	0.294246	0.830749	0.432942	0.082748	1.370321	0.464566	0.276594	0.842208
-0.44988	0.248857	-1.11978	-0.70377	-0.1729	-0.99501	-0.05527	-0.51765	-0.16364	-0.94545
0.41424	0.102118	0.131073	-0.83489	0.22136	-0.71112	0.023161	-0.01895	0.154603	-0.2633
1.260852	1.568508	0.470981	1.485524	0.983861	0.818531	1.130308	1.506363	1.004538	0.952114
-0.81933	0.346929	-1.31851	-0.42821	0.677516	-0.63301	-0.03247	-0.08302	-0.041	-0.7161
2.277075	2.357649	1.566259	2.001426	1.586605	1.34226	2.294021	2.523518	1.777705	1.570759
0.469566	0.921905	0.053362	0.230235	0.784895	-0.01826	0.683079	0.849922	0.655995	0.080902
3.004115	3.09641	2.184878	2.781968	3.075801	2.528125	2.674276	2.70992	2.613495	2.894959
1.140105	1.774251	1.171656	0.385821	1.245908	0.567998	1.339619	1.377671	1.925093	0.410604
1.453101	1.343361	0.543258	1.066212	1.222922	0.594574	1.23149	1.161178	0.761543	1.077807
-0.04026	0.28915	-0.36257	-0.42043	0.409262	-0.48275	-0.05251	0.15429	0.19773	-0.33023
0.491568	-0.53357	-0.49567	-0.54491	-0.49064	-0.94512	-0.59195	-0.61964	-0.93532	-0.05755
-0.88476	-0.94922	-1.18268	-1.71787	-1.17172	-1.76607	-1.30498	-1.1762	-0.89166	-1.52719
1.309315	1.564674	0.975771	0.846913	1.332973	0.745004	1.180205	1.422816	1.446366	0.867978
2.142456	1.918116	1.499958	1.305643	2.176126	1.250771	1.815394	1.694754	1.618078	1.791427
0.45054	0.467522	-0.17168	0.23441	0.12172	-0.287	0.245901	0.621603	0.077848	-0.01953
1.154648	1.342588	0.966885	0.32492	1.673509	0.383473	1.436519	1.521451	1.249357	0.663069
2.036993	1.745273	1.466002	0.88757	1.499594	0.723047	1.863418	1.623558	1.440975	1.215759

Lampiran 7. Data Simulasi 25 Variabel

X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	$\cdots$	X_{25}
0.534481	0.976256	0.260106	-0.20641	-0.36513	0.225368	1.060761	0.53175	$\cdots$	0.387338
0.387086	1.057401	0.619172	0.30917	0.227523	-0.02273	0.402175	0.165319	$\cdots$	0.469283
0.259105	0.790676	-0.16985	0.72833	0.859872	0.515251	-0.02616	-0.19941	$\cdots$	1.206757
-2.05226	-1.26644	-1.62508	-1.95996	-1.9919	-1.55806	-1.11734	-1.74439	$\cdots$	-0.79115
-1.28852	-0.76989	-1.28481	-1.71341	-1.79936	-1.28041	-1.08992	-1.30487	$\cdots$	-1.37561
1.887488	2.380994	1.651835	1.766439	1.622189	1.421114	2.028823	1.692109	$\cdots$	2.232782
1.887201	2.184591	1.722792	2.167505	1.632633	2.119603	2.433258	1.860486	$\cdots$	3.073885
1.319322	1.373111	0.99721	0.784031	0.626302	1.223664	1.972933	0.757719	$\cdots$	1.380494
1.249637	1.416462	0.915744	0.165178	0.315336	0.393817	1.699272	0.591444	$\cdots$	0.347753
0.517043	0.970198	-0.04146	0.023373	-0.12707	-0.09376	-0.31196	-0.3416	$\cdots$	-0.08607
2.05158	2.170659	1.903533	1.412745	1.336862	1.660705	1.902098	0.834659	$\cdots$	2.222896
1.334052	2.28873	1.28051	1.969339	1.200211	1.715469	1.539118	1.326086	$\cdots$	1.795837
1.534713	2.144665	1.67419	2.489533	1.905921	1.701169	2.209832	2.255645	$\cdots$	2.273431
-0.78786	-0.51359	-0.34116	-0.31849	-1.05956	0.091982	0.497485	0.176551	$\cdots$	-0.05559
-0.98177	0.037925	-0.80981	-0.66915	-1.30523	-1.14412	-1.35502	-0.9576	$\cdots$	-0.12231
1.597142	2.168444	1.260145	1.222217	1.283314	0.782275	1.553182	0.912099	$\cdots$	1.209914
-0.41643	0.494511	-0.68377	-0.12062	-0.6594	-0.36789	-0.62561	-0.85988	$\cdots$	0.400004
0.1727	0.763555	0.413548	0.724717	0.144953	0.003082	0.628323	0.616337	$\cdots$	0.687471
$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\ddots$	$\vdots$
-0.23225	0.150145	-0.36535	0.251036	-0.1968	-0.11343	0.052776	-0.42249	$\cdots$	0.786371

Lampiran 8. Data Simulasi 40 Variabel

X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	$\cdots$	X_{40}
-0.56301	-0.69508	-0.73195	-1.5429	-0.25521	-0.77638	-0.96202	-0.12412	$\cdots$	-1.5666
-1.49427	-1.39045	-1.43346	-1.13391	-1.41806	-1.72282	-1.48602	-1.44019	$\cdots$	-2.32279
0.503057	0.481428	0.446399	0.267199	-0.30547	0.165901	-0.30106	0.455862	$\cdots$	0.319488
0.983753	1.035653	1.092464	0.628231	1.038908	0.527837	0.588661	1.690864	$\cdots$	0.434782
-0.96918	-0.7099	-0.52636	-0.27248	-0.11909	-0.28671	-0.61508	0.765525	$\cdots$	-0.79634
0.296982	1.039024	0.599425	0.879606	1.021376	0.623891	0.501218	1.515046	$\cdots$	0.433171
-0.19034	-0.35119	-0.47564	-0.15641	0.022459	0.21492	-0.31045	0.727374	$\cdots$	-1.0651
1.366209	1.013586	1.663696	0.639425	1.382789	-0.08803	0.344828	1.101281	$\cdots$	0.341906
0.794307	1.37863	0.939139	0.576511	1.539619	1.021908	0.738757	1.741881	$\cdots$	0.65768
-0.56453	-0.78644	-0.30016	-0.35785	-0.23951	-0.1828	-1.24939	0.478309	$\cdots$	-1.02516
1.552819	1.612107	1.50354	1.80209	1.024175	1.438415	0.786681	1.261208	$\cdots$	0.614393
1.403133	2.459839	1.873463	1.667911	1.943459	2.421709	1.301109	2.960599	$\cdots$	2.268315
0.133085	-0.25891	0.130394	0.161978	-0.14012	-0.52254	-0.65824	-0.23799	$\cdots$	-1.18664
0.193005	0.481109	0.21387	0.958975	0.630036	0.969433	0.476784	1.141144	$\cdots$	-0.06744
1.274761	1.324475	0.992139	0.679449	1.349721	0.855014	1.354737	2.016845	$\cdots$	0.466635
0.407952	1.492043	0.797878	0.919786	1.27684	1.005768	0.4591	1.763441	$\cdots$	1.111859
0.182797	-0.15172	-0.02452	-0.04592	0.022072	-0.20818	-0.60848	0.31693	$\cdots$	-0.60571
-0.79787	-0.36464	-0.78659	-0.76749	-0.24985	-0.70801	-0.82405	0.013774	$\cdots$	-1.24341
$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\ddots$	$\vdots$
0.197524	0.358642	0.36999	0.985183	0.886908	0.727502	0.490995	1.474273	$\cdots$	0.236037

Lampiran 9. Data Simulasi 50 Variabel

X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	$\cdots$	X_{50}
-0.90186	-0.39855	-0.21503	0.153703	-0.05124	-0.64227	-0.42796	-0.56302	$\cdots$	0.537848
1.800864	1.964351	1.95928	2.112038	1.177769	1.023243	1.24802	1.54979	$\cdots$	1.587238
-1.25279	-1.20971	-1.21739	-0.74867	-1.61075	-1.1163	-0.75987	-0.87969	$\cdots$	-0.59424
2.989583	2.318882	2.853064	2.887213	2.823699	2.498588	2.866673	2.977952	$\cdots$	3.27367
0.401245	0.596868	0.46452	0.451135	0.391146	-0.25157	0.211844	0.308595	$\cdots$	1.335433
0.193723	0.195836	-0.02309	0.958529	0.391626	0.031633	-0.12873	0.565253	$\cdots$	0.870396
1.472959	2.025005	1.380493	2.476699	1.531191	0.339056	1.685103	1.496911	$\cdots$	2.081765
0.153404	-0.02426	0.017643	0.152416	0.668268	-0.25288	0.053517	0.040172	$\cdots$	0.747143
1.194636	0.35841	0.690335	0.518775	0.320989	0.074951	0.75277	0.779927	$\cdots$	0.5114
1.13919	1.521629	1.573038	1.831591	1.369484	0.038295	1.050531	0.888526	$\cdots$	1.568301
2.161354	2.37982	1.542798	2.8551	1.887634	1.545437	0.962897	1.594537	$\cdots$	2.712442
-0.20339	-0.24344	-0.77782	0.012761	-0.12996	-1.02039	-0.71032	-0.85104	$\cdots$	0.271559
-0.25402	-0.3876	0.071931	-0.06024	-0.24328	-0.89541	0.35168	-0.25717	$\cdots$	0.278601
-0.43923	-0.1464	-0.25481	0.527449	-0.95422	-0.67046	-0.29294	-0.37151	$\cdots$	0.269652
1.220192	0.500289	0.806141	0.616973	0.36331	0.346417	0.358803	1.350314	$\cdots$	0.637029
0.818276	1.712358	1.469973	1.562813	1.102503	0.031436	1.38514	0.958815	$\cdots$	1.864111
0.233578	0.64516	0.745975	1.249988	0.166157	-0.35516	0.366863	0.476816	$\cdots$	0.649851
-0.79263	-0.75568	-1.3173	-0.82864	-1.38326	-1.10595	-0.43582	-0.0571	$\cdots$	0.045413
$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\ddots$	$\vdots$
0.714152	0.068668	0.577825	0.696555	0.735026	0.452773	1.14376	1.096564	$\cdots$	0.975344

Lampiran 10. Data Simulasi 75 Variabel

X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	⋯	X_{75}
1.777233	0.865207	1.000884	0.93787	0.596447	0.464114	0.842478	1.326726	⋯	1.426402
0.137986	-0.27193	-0.51826	-0.74311	-0.7234	-0.03595	0.108607	0.199148	⋯	-0.10971
1.420827	0.540696	1.0897	0.601681	0.185155	0.637639	0.96982	1.20464	⋯	0.701004
2.10997	0.247325	0.708456	1.209157	1.090164	0.276775	1.003392	1.416072	⋯	1.099624
0.926885	0.744781	0.633202	0.261437	0.414933	0.601177	0.961734	0.650047	⋯	0.733602
-0.10602	-1.39667	-0.54465	-0.14851	-0.17678	0.21815	-0.41454	-0.08831	⋯	-0.13996
0.351141	-0.35871	0.000878	-0.26401	-0.73275	-0.31872	0.473836	-0.02816	⋯	-0.20647
0.204269	-0.27511	-0.0973	-0.49453	-0.49091	-0.1918	0.696941	0.818304	⋯	0.408339
-0.01805	-1.48926	-0.6703	-0.70276	-1.18665	-0.43917	-0.77521	-0.44232	⋯	-1.02624
1.057497	0.187526	0.281434	0.969931	0.517924	0.357314	0.682045	0.979006	⋯	0.22013
0.880304	0.132699	0.302248	-0.27926	-0.55704	0.491984	0.926006	0.813063	⋯	1.032906
0.884932	0.312854	0.436214	-0.18005	-0.2379	0.450015	0.913407	0.822357	⋯	0.786951
0.903276	0.390177	0.513926	0.696202	0.536154	0.180659	1.247792	0.955514	⋯	1.14196
1.20916	1.050013	0.508405	0.711938	0.922486	0.730712	1.33497	1.737103	⋯	1.765684
0.337419	-0.17897	-0.51056	0.04363	-0.0951	0.785141	0.646338	0.696488	⋯	0.579836
-0.04588	-0.98456	-0.78504	-0.77934	-0.32005	-0.51849	-0.77398	-0.3262	⋯	-0.26764
0.3788	-0.06583	-0.03399	0.17187	-0.44673	0.245155	0.041788	0.665937	⋯	0.268673
1.171806	-0.78999	0.133029	-0.2269	-0.73337	0.290752	0.047618	0.649143	⋯	0.443631
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋱	⋮
2.74187	1.9201	1.591264	1.489202	1.369333	2.342492	2.18495	2.676723	⋯	1.774541

Lampiran 11. Data Simulasi 100 Variabel

X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	⋯	X_{100}
-0.29658	-0.50848	-0.78482	-0.27543	0.411911	0.013314	-0.83292	-0.30634	⋯	-0.14303
-0.04578	-0.55396	0.553077	0.256807	0.329155	0.138306	-0.33846	0.277623	⋯	0.461103
0.906518	-0.33095	0.809052	1.403733	0.499281	0.986645	0.683667	0.765598	⋯	1.32319
1.405301	0.889454	1.279486	1.955955	1.133012	1.233346	0.548141	1.617767	⋯	1.411022
-0.32667	-0.48153	-0.22972	-0.56488	0.264527	-0.6558	-0.86096	0.004808	⋯	-0.24284
0.8451	0.490295	0.910387	1.151801	1.69292	1.022517	0.486414	1.281132	⋯	0.987432
1.73386	0.519397	1.579203	1.777765	0.98859	1.206597	1.248925	1.670072	⋯	2.28238
0.636161	-0.05425	0.544465	0.544366	1.462179	1.101207	0.216193	0.535483	⋯	1.163622
0.265815	0.164634	0.583612	0.170537	0.898697	0.574714	0.201917	0.125322	⋯	0.873562
0.256495	-0.05463	0.494038	0.174859	0.645096	0.819232	-0.43223	0.037114	⋯	0.149303
2.096782	1.913847	1.392823	2.374487	2.157226	2.602033	1.961268	1.686484	⋯	2.203124
0.09992	-0.25987	-0.39917	0.191062	0.769711	0.510362	0.086911	-0.08007	⋯	0.293674
0.438903	-0.32945	0.09867	0.398466	0.00391	1.079095	-0.78979	-0.24004	⋯	0.446243
1.290695	1.618994	1.237279	1.367061	2.636934	2.273441	1.458856	1.847841	⋯	2.356647
-1.43379	-1.1512	-0.80966	-0.99532	-0.5359	-1.02513	-1.20001	-0.9503	⋯	-0.95886
1.337928	0.93393	0.765617	1.090902	1.371305	1.172356	0.459836	1.103856	⋯	1.047871
3.780634	2.718073	3.454692	4.051277	3.424876	3.452987	2.741124	3.225342	⋯	3.329927
0.344214	-0.67722	0.220816	0.206294	0.130149	0.637166	-0.92448	0.036035	⋯	-0.15961
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋱	⋮
0.898854	0.079282	0.291793	1.149551	1.420263	0.559359	0.361558	0.741213	⋯	0.793079

Lampiran 12. Jarak Mahalanobis MVV (MMVV)

No	Jarak MMVV	No	Jarak MMVV	No	Jarak MMVV
1	101.46275	41	101.56999	81	97.97661
2	95.85685	42	**881.72341**	82	100.06474
3	97.14494	43	97.25177	83	99.81955
4	102.27510	44	88.90537	84	104.27125
5	101.08685	45	104.91774	85	**1362.73999**
6	100.13426	46	100.66103	86	93.09880
7	100.30185	47	100.34048	87	102.35034
8	**853.38338**	48	98.42670	88	103.13362
9	100.40085	49	99.91631	89	101.20296
10	103.06030	50	90.58919	90	98.90712
11	103.66693	51	**1133.28742**	91	96.34389
12	95.56270	52	98.63338	92	94.74871
13	97.85495	53	102.88687	93	98.02722
14	100.20577	54	97.29211	94	86.35467
15	101.04860	55	93.43746	95	99.13271
16	98.61903	56	100.13971	96	98.85770
17	101.90167	57	101.51188	97	99.90248
18	101.78170	58	95.19396	98	99.70146
19	103.20507	59	104.41141	99	**1743.01694**
20	**1369.15482**	60	94.43872	100	100.24709
21	96.97472	61	95.64667	101	100.10687
22	104.09439	62	99.51805	102	103.94530
23	102.82201	63	96.65996	103	101.92701
24	98.29120	64	100.70340	104	102.30130
25	103.53056	65	88.30375	105	101.98426
26	98.61932	66	**1468.36399**	106	100.45554
27	92.17478	67	95.75690	107	103.04367
28	99.92153	68	99.76737	108	99.02685
29	103.16580	69	99.95655	109	96.30857
30	100.06540	70	99.26792	110	104.12463
31	105.42507	71	94.80318	111	102.94347
32	97.07632	72	**1129.08326**	112	100.43026
33	98.50450	73	93.11616	113	98.30947
34	105.33496	74	101.26703	114	97.63008
35	102.61876	75	101.96581	115	96.37796
36	102.88248	76	98.35183	116	95.98800
37	92.66684	77	101.93965	117	**1057.45173**
38	101.27696	78	97.85836	118	97.04788
39	**1443.42934**	79	97.97074	119	99.55864
40	85.60369	80	96.80318	120	97.54925

Lampiran 13. Jarak Depth Mahalanobis MVV (DMMVV)

No	Jarak DMMVV	No	Jarak DMMVV	No	Jarak DMMVV
1	0.0100693293	41	0.0094734037	81	0.0093542420
2	0.0101565942	42	**0.0008749914**	82	0.0106065224
3	0.0100286966	43	0.0097722866	83	0.0095282807
4	0.0100098608	44	0.0107523550	84	0.0103089049
5	0.0099989068	45	0.0095306489	85	**0.0004951078**
6	0.0102801694	46	0.0099145861	86	0.0102855405
7	0.0096482595	47	0.0097055823	87	0.0096764511
8	**0.0008857586**	48	0.0096476224	88	0.0098940140
9	0.0110678033	49	0.0100689608	89	0.0098111090
10	0.0099527027	50	0.0100924051	90	0.0098047106
11	0.0097058676	51	**0.0007673097**	91	0.0099113557
12	0.0099201547	52	0.0107642903	92	0.0104835970
13	0.0098207389	53	0.0099754255	93	0.0106946483
14	0.0100036725	54	0.0100173654	94	0.0105045409
15	0.0102277797	55	0.0103211175	95	0.0099184196
16	0.0100560717	56	0.0101962774	96	0.0101843280
17	0.0099272734	57	0.0095969265	97	0.0095571048
18	0.0096107279	58	0.0102170686	98	0.0098310810
19	0.0098596854	59	0.0097834379	99	**0.0005821596**
20	**0.0004510625**	60	0.0097799033	100	0.0110653802
21	0.0098541281	61	0.0100659759	101	0.0099803990
22	0.0099659890	62	0.0100901344	102	0.0097515025
23	0.0098692818	63	0.0101512831	103	0.0096296579
24	0.0101656567	64	0.0095536624	104	0.0095986854
25	0.0102601818	65	0.0103274074	105	0.0095902840
26	0.0099879770	66	**0.0011402654**	106	0.0104136413
27	0.0103180073	67	0.0099245138	107	0.0095318711
28	0.0106330835	68	0.0097759506	108	0.0106947337
29	0.0097240580	69	0.0102707205	109	0.0103050666
30	0.0101908901	70	0.0097940289	110	0.0095244184
31	0.0095810333	71	0.0105955440	111	0.0099808016
32	0.0096280792	72	**0.0021676433**	112	0.0098348797
33	0.0098869254	73	0.0102604602	113	0.0098205607
34	0.0096345595	74	0.0098813218	114	0.0101138948
35	0.0097037977	75	0.0098957763	115	0.0098671823
36	0.0095568037	76	0.0097966742	116	0.0098026357
37	0.0104802649	77	0.0102591793	117	**0.0010649123**
38	0.0101382849	78	0.0105266186	118	0.0102190102
39	**0.0016464051**	79	0.0095537388	119	0.0097439602
40	0.0099731707	80	0.0101599746	120	0.0100719368

Lampiran 14. Jarak *Robust* Depth Mahalanobis MVV (RDMMVV)

No	Jarak RDMMVV	No	Jarak RDMMVV	No	Jarak RDMMVV
1	-2.330296e-139	41	-2.236895e-139	81	-2.295448e-139
2	-2.331563e-139	42	**-3.049993e-138**	82	-2.385754e-139
3	-2.053260e-139	43	-2.170291e-139	83	-2.259528e-139
4	-2.399521e-139	44	-2.301845e-139	84	-2.135389e-139
5	-2.365463e-139	45	-2.323205e-139	85	**-2.515689e-138**
6	-2.218728e-139	46	-2.387957e-139	86	-2.352451e-139
7	-2.332542e-139	47	-2.335681e-139	87	-2.382891e-139
8	**-3.740092e-138**	48	-2.404928e-139	88	-2.105924e-139
9	-2.120454e-139	49	-2.256687e-139	89	-2.302577e-139
10	-2.235500e-139	50	-2.371822e-139	90	-2.306274e-139
11	-2.303377e-139	51	**-2.864144e-138**	91	-2.371176e-139
12	-2.373031e-139	52	-2.401304e-139	92	-2.120747e-139
13	-2.249054e-139	53	-2.441811e-139	93	-2.107584e-139
14	-2.410751e-139	54	-2.263470e-139	94	-2.370560e-139
15	-2.359279e-139	55	-2.416426e-139	95	-2.406981e-139
16	-2.209595e-139	56	-2.081232e-139	96	-2.147401e-139
17	-2.212837e-139	57	-2.414317e-139	97	-2.356478e-139
18	-2.346442e-139	58	-2.190282e-139	98	-2.314248e-139
19	-2.358211e-139	59	-2.392592e-139	99	**-3.948796e-138**
20	**-2.850156e-138**	60	-2.355968e-139	100	-2.189588e-139
21	-2.241314e-139	61	-2.396772e-139	101	-2.304357e-139
22	-2.173731e-139	62	-2.301953e-139	102	-2.401810e-139
23	-2.403947e-139	63	-2.217787e-139	103	-2.176083e-139
24	-2.380392e-139	64	-2.200600e-139	104	-2.331072e-139
25	-2.165540e-139	65	-2.429791e-139	105	-2.380271e-139
26	-2.316890e-139	66	**-1.517455e-138**	106	-2.307853e-139
27	-2.126500e-139	67	-2.342409e-139	107	-2.473894e-139
28	-2.283296e-139	68	-2.302104e-139	108	-2.249158e-139
29	-2.350032e-139	69	-2.302503e-139	109	-2.111851e-139
30	-2.118267e-139	70	-2.432404e-139	110	-2.192028e-139
31	-2.346848e-139	71	-2.387960e-139	111	-2.397073e-139
32	-2.272707e-139	72	**-4.163222e-138**	112	-2.298736e-139
33	-2.178984e-139	73	-2.341879e-139	113	-2.360023e-139
34	-2.319269e-139	74	-2.369862e-139	114	-2.359085e-139
35	-2.189285e-139	75	-2.283152e-139	115	-2.003750e-139
36	-1.998311e-139	76	-2.271451e-139	116	-2.174457e-139
37	-2.367279e-139	77	-2.134790e-139	117	**-4.423197e-138**
38	-2.357849e-139	78	-2.268159e-139	118	-2.278853e-139
39	**-4.017928e-138**	79	-2.282243e-139	119	-2.380251e-139
40	-2.186127e-139	80	-2.255406e-139	120	-2.289568e-139

Lampiran 15. Listing Program R Data Simulasi Normal Multivariat

```
n <- 100 #Variable

r <- 120 #Observation

m <- combn(n,2)

value <- runif(dim(m)[2], min = 0.8, max = 1)

mat <- matrix(1,n,n)

for (i in 1:(dim(m)[2])) {

  mat[m[1,i],m[2,i]] <- value[i]

  mat[m[2,i],m[1,i]] <- value[i]

}

NearPDList <- nearPD(mat, corr = T)

sigma <- matrix(NearPDList[["mat"]]@x, ncol = n, nrow = n)

mu <- runif(n, min = 0, max = 1)

data <- data.frame(mvrnorm(n = r, mu, sigma))

dataCorr <- data.frame(cor(data, method = "pearson"))

dataMean <- data.frame(colMeans(data))

colnames(data) <- paste("X",rep(1:n), sep = "")

row.names(data) <- paste("OBS",rep(1:r), sep = "")

colnames(dataCorr) <- paste("X",rep(1:n), sep = "")

row.names(dataCorr) <- paste("X",rep(1:n), sep = "")

colnames(dataMean) <- "Mean"

row.names(dataMean) <- paste("X",rep(1:n), sep = "")


write.xlsx(data, paste("dataNormMult",n,"Var",r,"Obs.xlsx", sep = ""),
sheetName = "Data")

write.xlsx(dataCorr, paste("dataNormMult",n,"Var",r,"Obs.xlsx", sep =
""), sheetName = "Correlation", append = T)

write.xlsx(dataMean, paste("dataNormMult",n,"Var",r,"Obs.xlsx", sep =
""), sheetName = "Mean", append = T)
```

Lampiran 16. Listing Program R Untuk Algoritma MMVV

```
data <- as.data.frame(read_csv("data1000.csv")[,1:500])
n <- dim(data)[1]
p <- dim(data)[2]

X_bar_t <- list()
S_t <- list()
d_t <- list()
trace <- list()
t <- 1

h <- as.integer(floor(n + p + 1)/2)
H_old <- as.data.frame(data[sample(1:n,h),])
X_bar_old <- colMeans(H_old)
S_old <- cov(H_old)
MahalanobisMVV <- mahalanobis(data, X_bar_old, S_old)

X_bar_t[[t]] <- X_bar_old
S_t[[t]] <- S_old
d_t[[t]] <- MahalanobisMVV
trace[[t]] <- tr(S_old)

X <- as.data.frame((data[order(MahalanobisMVV, decreasing = FALSE),]))
H_new <- X[1:h,]
X_bar_new <- colMeans(H_new)
S_new <- cov(H_new)

while ((tr(S_old)!=tr(S_new))) {
  t <- t + 1
  H_old <- H_new
  X_bar_old <- X_bar_new
  S_old <- S_new
  MahalanobisMVV <- mahalanobis(data, X_bar_old, S_old)

  X_bar_t[[t]] <- X_bar_old
  S_t[[t]] <- S_old
  d_t[[t]] <- MahalanobisMVV
  trace[[t]] <- tr(S_old)

  X <- as.data.frame((data[order(MahalanobisMVV, decreasing = FALSE),]))
  H_new <- X[1:h,]
  X_bar_new <- colMeans(H_new)
  S_new <- cov(H_new)
}
```

Lampiran 17. Listing Program R Untuk Algoritma DMMVV

```
data <- as.data.frame(read_csv("data1000.csv")[,1:500])
n <- dim(data)[1]
p <- dim(data)[2]

X_bar_t <- list()
S_t <- list()
Md_t <- list()
trace <- list()
t <- 1

h <- as.integer(floor(n + p + 1)/2)
H_old <- as.data.frame(data[sample(1:n,h),])
X_bar_old <- colMeans(H_old)
S_old <- cov(H_old)
DepthMahalanobisMVV <- 1/(1+mahalanobis(data, X_bar_old, S_old))
X_bar_t[[t]] <- X_bar_old
S_t[[t]] <- S_old
Md_t[[t]] <- DepthMahalanobisMVV
trace[[t]] <- tr(S_old)
X <- as.data.frame((data[order(DepthMahalanobisMVV, decreasing = TRUE),]))
H_new <- X[1:h,]
X_bar_new <- colMeans(H_new)
S_new <- cov(H_new)
while ((tr(S_old)!=tr(S_new)))
{
  t <- t + 1
  H_old <- H_new
  X_bar_old <- X_bar_new
  S_old <- S_new
  DepthMahalanobisMVV <- 1/(1+mahalanobis(data, X_bar_old, S_old))
  X_bar_t[[t]] <- X_bar_old
  S_t[[t]] <- S_old
  Md_t[[t]] <- DepthMahalanobisMVV
  trace[[t]] <- tr(S_old)
  X <- as.data.frame((data[order(DepthMahalanobisMVV, decreasing =
TRUE),]))
  H_new <- X[1:h,]
  X_bar_new <- colMeans(H_new)
  S_new <- cov(H_new)
}
```

Lampiran 18. Listing Program R Untuk Algoritma RDMMVV

```
data <- as.data.frame(read_csv("data1000.csv")[,1:500])
n <- dim(data)[1]
p <- dim(data)[2]
X_bar_t <- list()
S_t <- list()
Md_t <- list()
trace <- list()
t <- 1
h <- as.integer(floor(n + p + 1)/2)
H_old <- as.data.frame(data[sample(1:n,h),])
X_bar_old <- colMeans(H_old)
S_old <- cov(H_old)
Md_old <- matrix(0,n,1)
for (i in 1:n) {
  MB <- matrix(0,p+1,p+1)
  MB[1,1] <- 1
  MB[1,2:(p+1)] <- as.matrix(data[i,] - X_bar_old)
  MB[2:(p+1),1] <- as.matrix(t(data[i,] - X_bar_old))
  MB[2:(p+1),2:(p+1)] <- S_old
  Md_old[i] <- det(MB)}
X_bar_t[[t]] <- X_bar_old
S_t[[t]] <- S_old
Md_t[[t]] <- Md_old
trace[[t]] <- tr(S_old)
X <- as.data.frame((data[order(Md_old, decreasing = TRUE),]))
H_new <- X[1:h,]
X_bar_new <- colMeans(H_new)
S_new <- cov(H_new)
while ((tr(S_old)!=tr(S_new))) {
  t <- t + 1
  H_old <- H_new
  X_bar_old <- X_bar_new
  S_old <- S_new
  Md_old <- matrix(0,n,1)
  for (i in 1:n) {
    MB <- matrix(0,p+1,p+1)
    MB[1,1] <- 1
    MB[1,2:(p+1)] <- as.matrix(data[i,] - X_bar_old)
    MB[2:(p+1),1] <- as.matrix(t(data[i,] - X_bar_old))
    MB[2:(p+1),2:(p+1)] <- S_old
    Md_old[i] <- det(MB) }
  X_bar_t[[t]] <- X_bar_old
  S_t[[t]] <- S_old
  Md_t[[t]] <- Md_old
  trace[[t]] <- tr(S_old)
  X <- as.data.frame((data[order(Md_old, decreasing = TRUE),]))
  H_new <- X[1:h,]
  X_bar_new <- colMeans(H_new)
  S_new <- cov(H_new)}
```