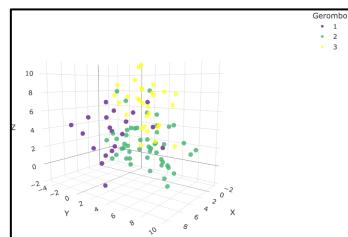
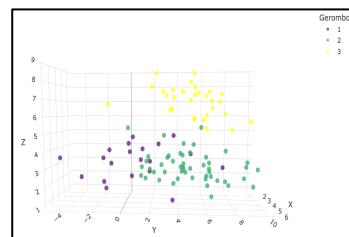


Lampiran 1 Skenario Bangkitan Data Simulasi untuk a) Skenario Jumlah 100 Amatan, b) Skenario Jumlah 500 Amatan, dan c) Skenario Jumlah 1000 Amatan

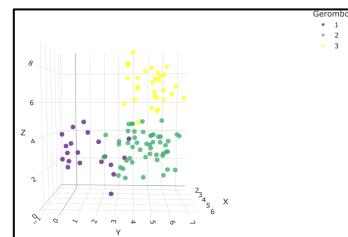
(a) Skenario Jumlah 100 Amatan



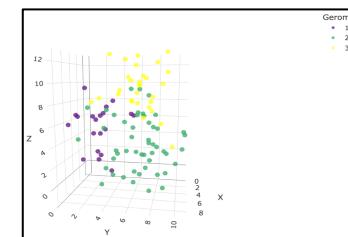
Persentase pencilan 0%, Jarak antar pusat gerombol dekat, dan 3 gerombol tumpang tindih



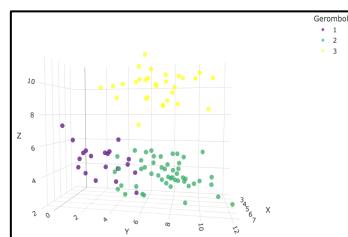
Persentase pencilan 0%, Jarak antar pusat gerombol dekat, dan 2 gerombol tumpang tindih 1 gerombol pisah



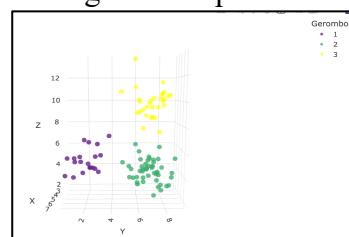
Persentase pencilan 0%, Jarak antar pusat gerombol dekat, dan 3 gerombol pisah



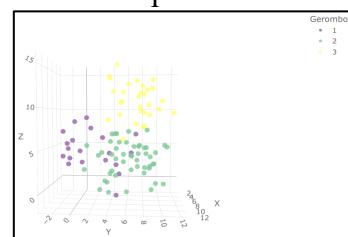
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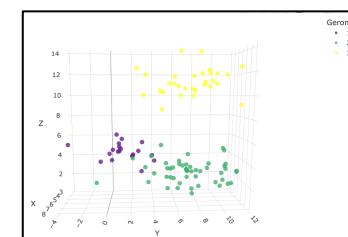
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Persentase pencilan 0%, Jarak antar pusat gerombol sedang, 3 gerombol pisah

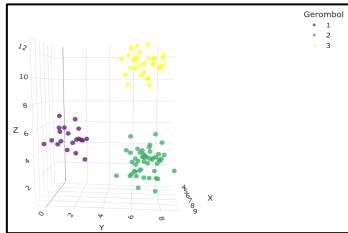


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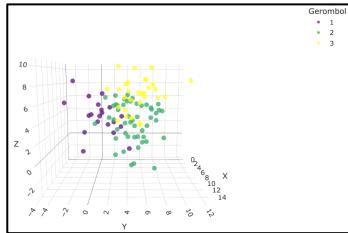


Persentase pencilan 0%, Jarak antar pusat gerombol jauh, dan 2 gerombol tumpang tindih 1 gerombol pisah

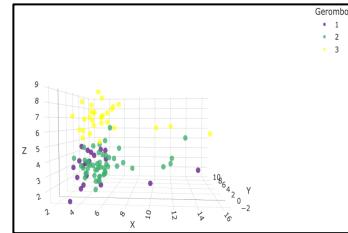
Lanjutan lampiran 1



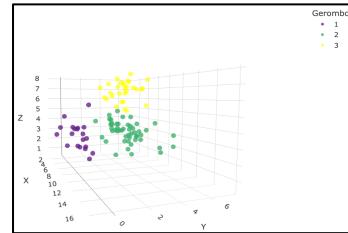
Persentase pencilan 0%, Jarak antar pusat gerombol jauh, dan 3 gerombol pisah



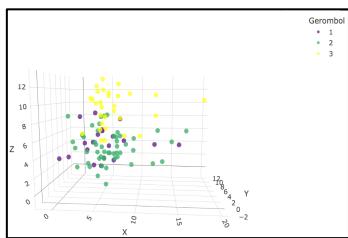
Persentase pencilan 10%, Jarak antar pusat gerombol dekat, dan 3 gerombol tumpang tindih



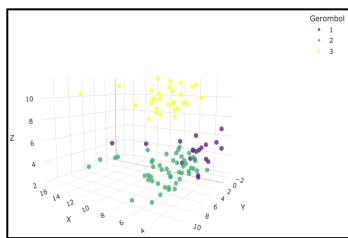
Persentase pencilan 10%, Jarak antar pusat gerombol dekat, dan 2 gerombol tumpang tindih
1 gerombol pisah



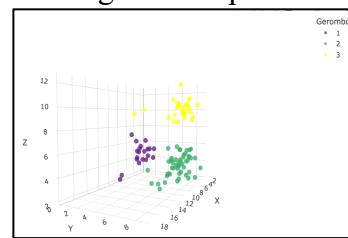
Persentase pencilan 10%, Jarak antar pusat gerombol dekat, dan 3 gerombol pisah



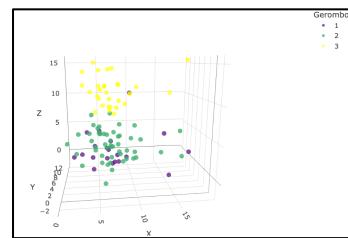
Persentase pencilan 10%, Jarak antar pusat gerombol sedang, dan 3 gerombol tumpang tindih
1 gerombol pisah



Persentase pencilan 10%, Jarak antar pusat gerombol sedang, dan 2 gerombol tumpang tindih
1 gerombol pisah

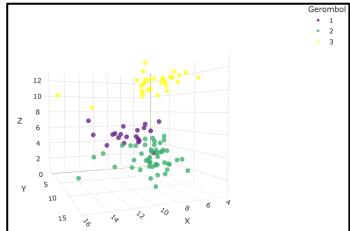


Persentase pencilan 10%, Jarak antar pusat gerombol sedang, dan 3 gerombol pisah

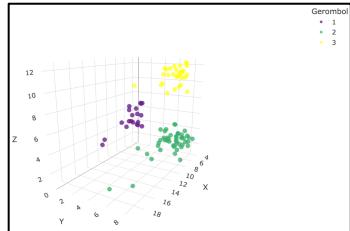


Persentase pencilan 10%, Jarak antar pusat gerombol jauh, dan 3 gerombol tumpang tindih

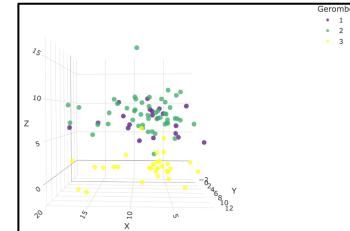
Lanjutan lampiran 1



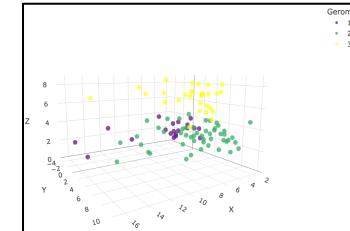
Persentase pencilan 10%, Jarak antar pusat gerombol jauh, dan 2 gerombol tumpang tindih 1 gerombol pisah



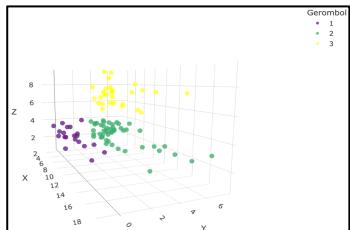
Persentase pencilan 10%, Jarak antar pusat gerombol jauh, dan 3 gerombol tumpang tindih



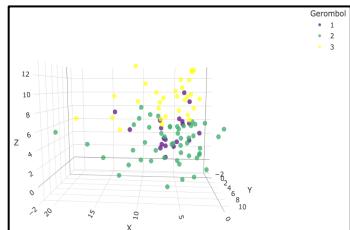
Persentase pencilan 20%, Jarak antar pusat gerombol dekat, dan 3 gerombol tumpang tindih



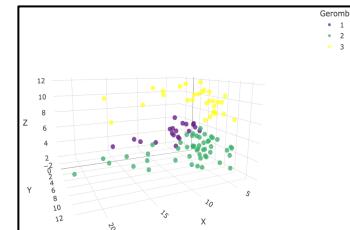
Persentase pencilan 20%, Jarak antar pusat gerombol dekat, dan 2 gerombol tumpang tindih 1 gerombol pisah



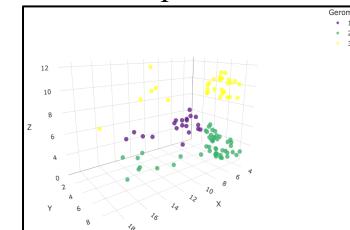
Persentase pencilan 20%, Jarak antar pusat gerombol dekat, dan 3 gerombol pisah



Persentase pencilan 20%, Jarak antar pusat gerombol sedang, dan 3 gerombol tumpang tindih

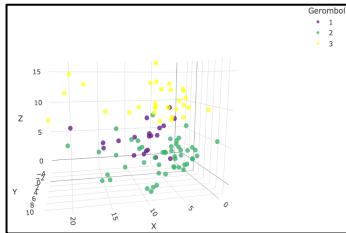


Persentase pencilan 20%, Jarak antar pusat gerombol sedang, dan 2 gerombol tumpang tindih 1 gerombol pisah

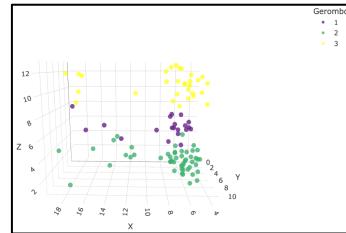


Persentase pencilan 20%, Jarak antar pusat gerombol sedang, dan

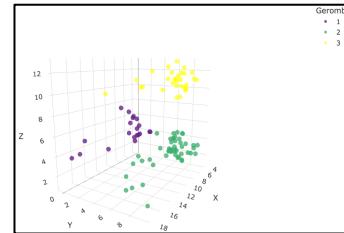
Lanjutan lampiran 1



Persentase pencilan 20%, Jarak antar pusat gerombol jauh, dan 3 gerombol tumpang tindih

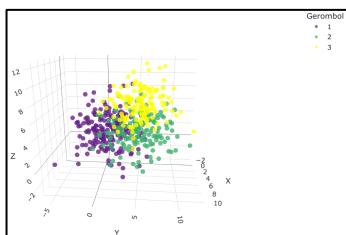


Persentase pencilan 20%, Jarak antar pusat gerombol jauh, dan 2 gerombol tumpang tindih 1 gerombol pisah

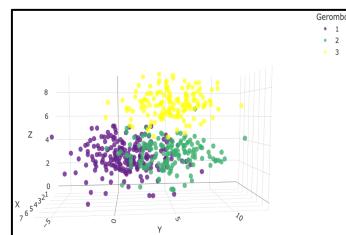


Persentase pencilan 20%, Jarak antar pusat gerombol jauh, dan 3 gerombol pisah

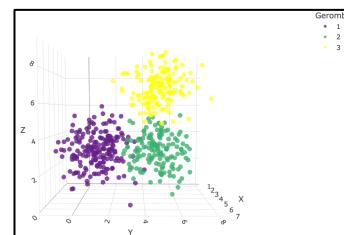
(b) Skenario Jumlah 500 Amatan



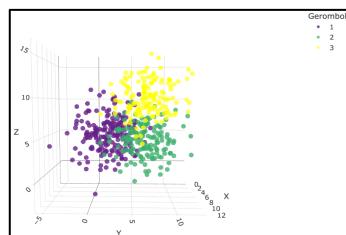
Persentase pencilan 0%, Jarak antar pusat gerombol dekat, dan 3 gerombol tumpang tindih



Persentase pencilan 0%, Jarak antar pusat gerombol dekat, dan 2 gerombol tumpang tindih 1 gerombol pisah

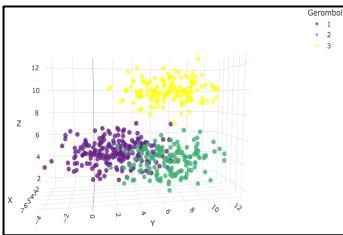


Persentase pencilan 0%, Jarak antar pusat gerombol dekat, dan 3 gerombol pisah

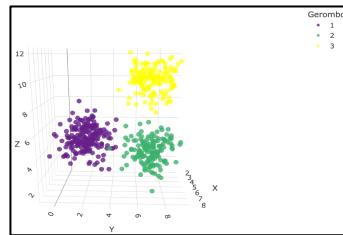


Persentase pencilan 0%, Jarak antar pusat gerombol sedang, dan 3 gerombol tumpang tindih

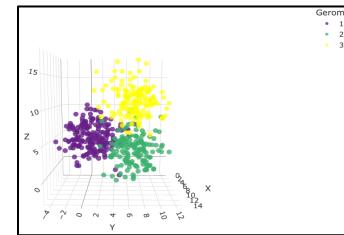
Lanjutan lampiran 1



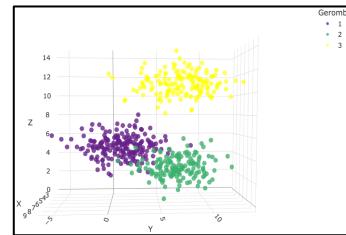
Persentase pencilan 0%, Jarak antar pusat gerombol sedang, dan 2 gerombol tumpang tindih 1 gerombol pisah



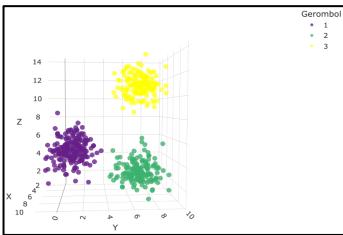
Persentase pencilan 0%, Jarak antar pusat gerombol sedang, dan 3 gerombol pisah



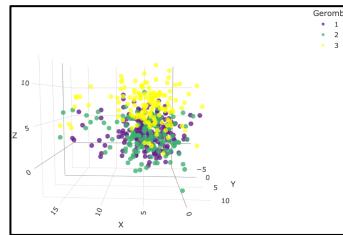
Persentase pencilan 0%, Jarak antar pusat gerombol jauh, dan 3 gerombol tumpang tindih



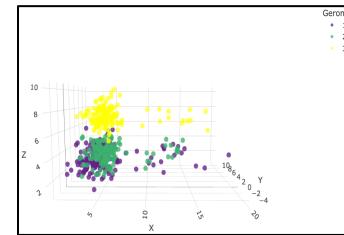
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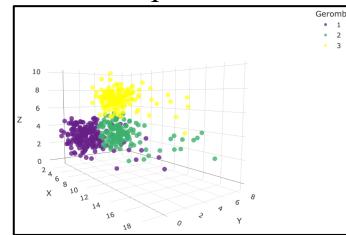
Persentase pencilan 0%, Jarak antar pusat gerombol jauh, dan 3 gerombol pisah



Persentase pencilan 10%, Jarak antar pusat gerombol dekat, dan 3 gerombol tumpang tindih

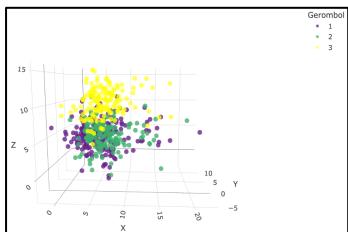


Persentase pencilan 10%, Jarak antar pusat gerombol dekat, dan 2 gerombol tumpang tindih 1 gerombol pisah

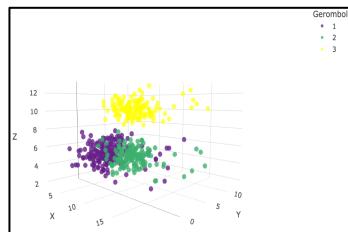


Persentase pencilan 10%, Jarak antar pusat gerombol dekat, dan 3 gerombol pisah

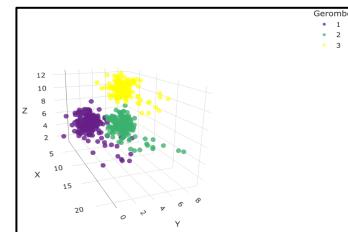
Lanjutan lampiran 1



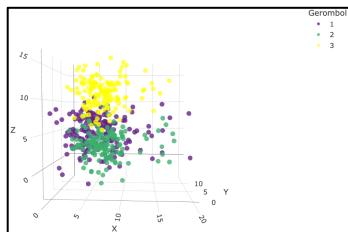
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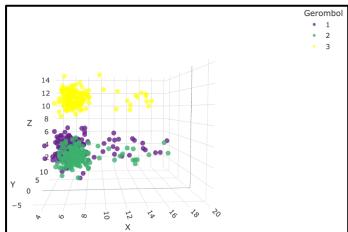
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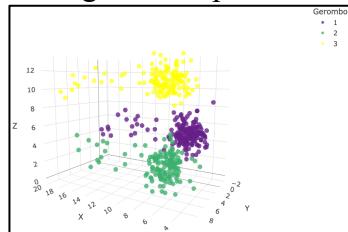
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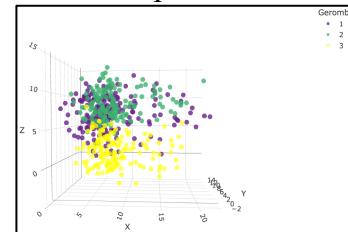
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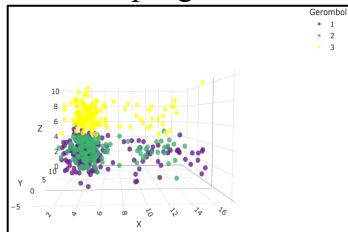
Persentase pencilan 10%, Jarak antar pusat gerombol jauh, dan 2 gerombol tumpang tindih 1 gerombol pisah



Persentase pencilan 10%, Jarak antar pusat gerombol jauh, dan 3 gerombol pisah

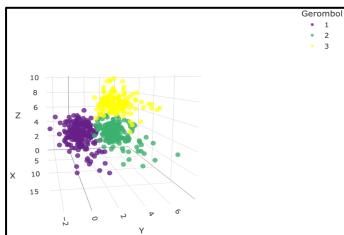


Persentase pencilan 20%, Jarak antar pusat gerombol dekat, dan 3 gerombol tumpang tindih

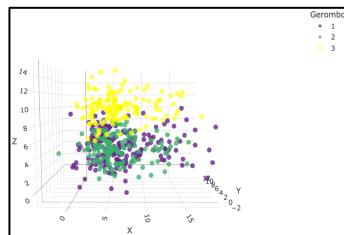


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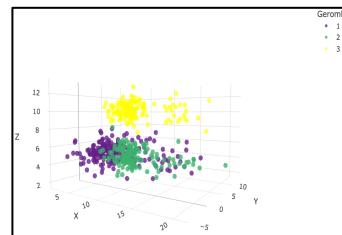
Lanjutan lampiran 1



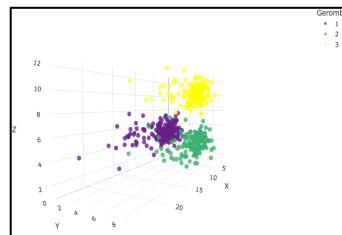
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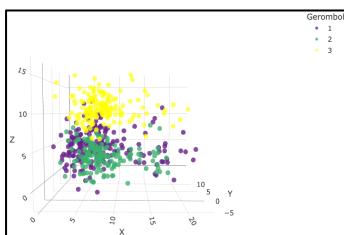
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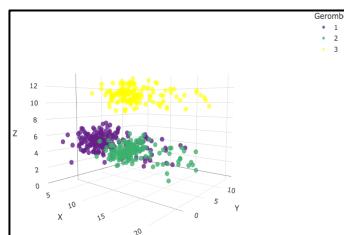
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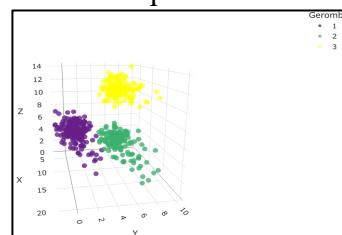
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Persentase pencilan 20%, Jarak antar pusat gerombol jauh, dan 3 gerombol tumpang tindih



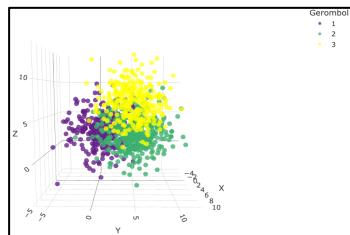
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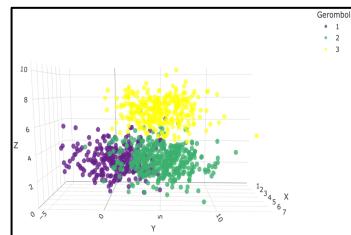
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Lanjutan lampiran 1

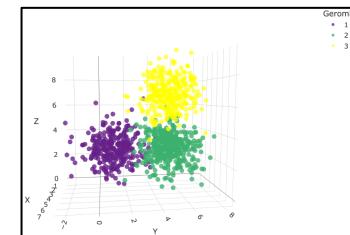
(c) Skenario Jumlah 1000 Amatan



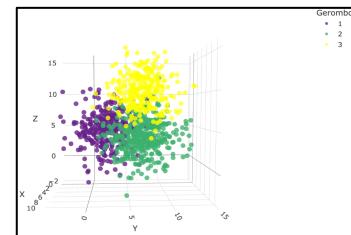
Persentase pencilan 0%, Jarak antar pusat gerombol dekat, dan 3 gerombol tumpang tindih



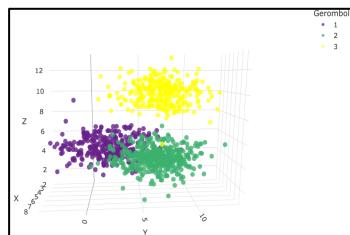
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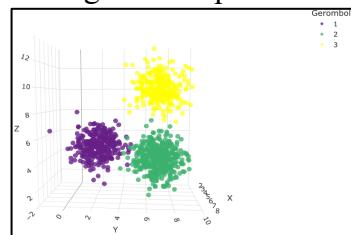
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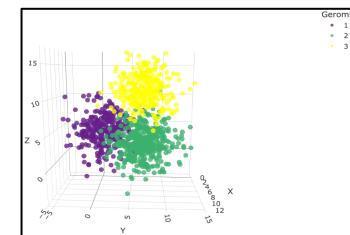
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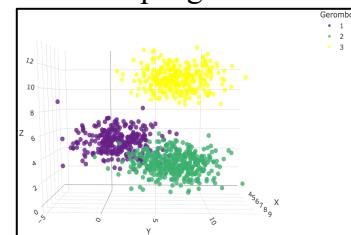
Persentase pencilan 0%, Jarak antar pusat gerombol sedang, dan 2 gerombol tumpang tindih 1 gerombol pisah



Persentase pencilan 0%, Jarak antar pusat gerombol sedang, dan 3 gerombol pisah

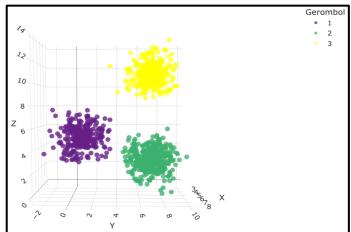


Persentase pencilan 0%, Jarak antar pusat gerombol jauh, dan 3 gerombol tumpang tindih

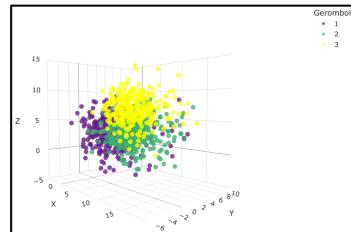


Persentase pencilan 0%, Jarak antar pusat gerombol jauh, dan 2 gerombol tumpang tindih 1 gerombol pisah

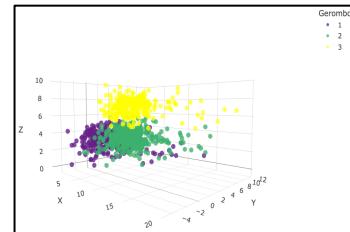
Lanjutan lampiran 1



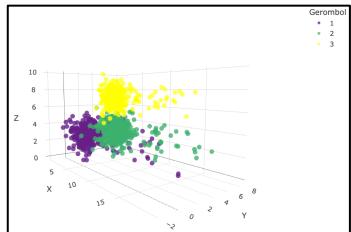
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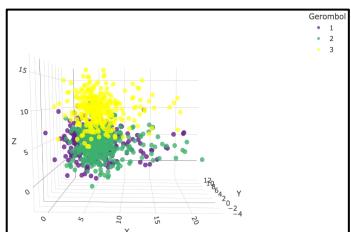
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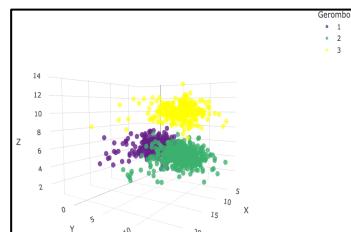
Persentase penculan 10%, Jarak antar pusat gerombol dekat, dan 2 gerombol tumpang tindih
1 gerombol pisah



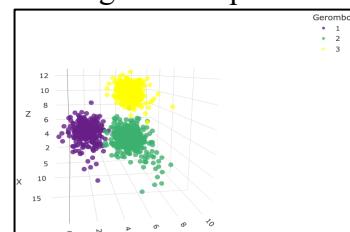
Persentase penculan 10%, Jarak antar pusat gerombol dekat, dan 3 gerombol pisah



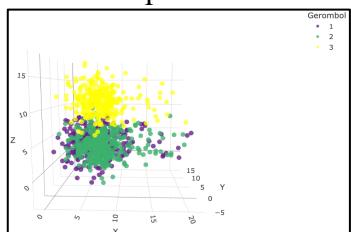
Persentase penculan 10%, Jarak antar pusat gerombol sedang, dan 3 gerombol tumpang tindih



Persentase penculan 10%, Jarak antar pusat gerombol sedang, dan 2 gerombol tumpang tindih
1 gerombol pisah

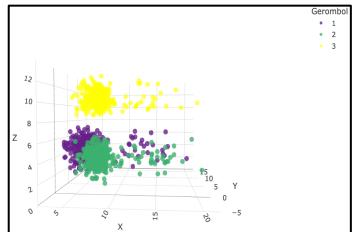


Persentase penculan 10%, Jarak antar pusat gerombol sedang, dan 3 gerombol pisah

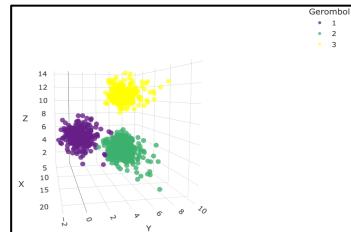


Persentase penculan 10%, Jarak antar pusat gerombol jauh, dan 3 gerombol tumpang tindih

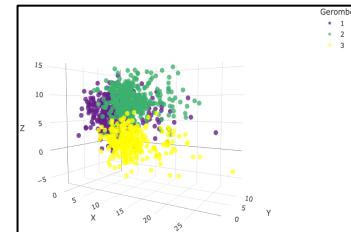
Lanjutan lampiran 1



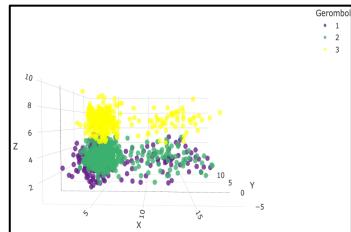
Persentase pencilan 10%, Jarak antar pusat gerombol jauh, dan 2 gerombol tumpang tindih 1 gerombol pisah



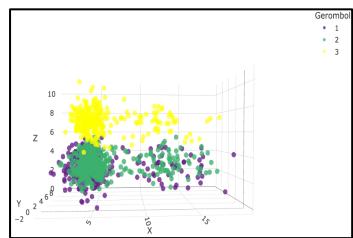
Persentase pencilan 10%, Jarak antar pusat gerombol jauh, dan 3 gerombol pisah



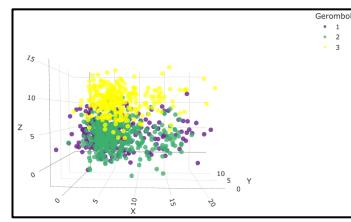
Persentase pencilan 20%, Jarak antar pusat gerombol dekat, dan 3 gerombol tumpang tindih



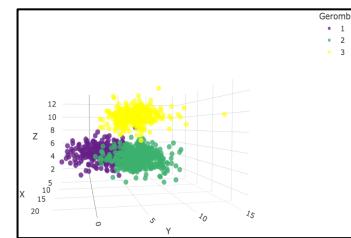
Persentase pencilan 20%, Jarak antar pusat gerombol dekat, dan 2 gerombol tumpang tindih 1 gerombol pisah



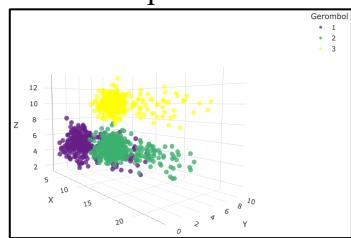
Persentase pencilan 20%, Jarak antar pusat gerombol dekat, dan 3 gerombol pisah



Persentase pencilan 20%, Jarak antar pusat gerombol sedang, dan 3 gerombol tumpang tindih

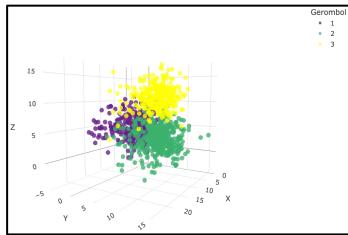


Persentase pencilan 20%, Jarak antar pusat gerombol sedang, dan 2 gerombol tumpang tindih 1 gerombol pisah

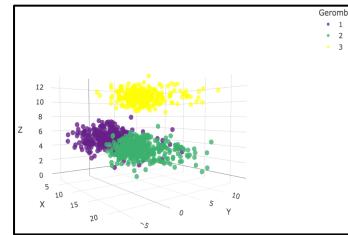


Persentase pencilan 20%, Jarak antar pusat gerombol sedang, dan 3 gerombol pisah

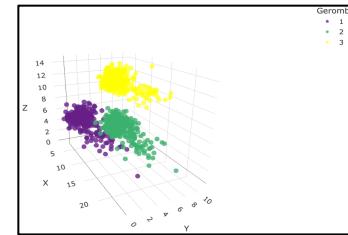
Lanjutan lampiran 1



Persentase pencilan 20%, Jarak antar pusat gerombol jauh, dan 3 gerombol tumpang tindih



Persentase pencilan 20%, Jarak antar pusat gerombol jauh, dan 2 gerombol tumpang tindih 1 gerombol pisah



Persentase pencilan 20%, Jarak antar pusat gerombol jauh, dan 3 gerombol pisah

Lampiran 2 Hasil Rataan Keseluruhan pada 100 Kali Ulangan pada Data Simulasi

(a) Skenario Bangkitan Data Simulasi untuk Persentase Pencilan 0%

Pencilan	Kondisi	Jarak	Jumlah amatan	Rasio Simpangan Baku			Akurasi	
				Data Awal	CLARA	FCM	CLARA	FCM
0%	3 Gerombol	Dekat	100	0,233	0,288	0,268	44%	44%
			500	0,165	0,128	0,125	55%	56%
			1000	0,091	0,085	0,082	53%	51%
		Sedang	100	0,194	0,266	0,262	54%	50%
			500	0,138	0,114	0,109	61%	66%
			1000	0,075	0,076	0,074	61%	63%
	2 Gerombol	Tindih	100	0,160	0,203	0,211	65%	65%
			500	0,117	0,105	0,101	75%	76%
			1000	0,064	0,065	0,066	70%	72%
		Jauh	100	0,160	0,192	0,183	70%	74%
			500	0,113	0,092	0,087	71%	72%
			1000	0,062	0,060	0,056	75%	78%
3 Gerombol	Tumpang	Dekat	100	0,130	0,151	0,157	81%	81%
			500	0,095	0,078	0,076	84%	83%
			1000	0,051	0,051	0,051	80%	79%
		Sedang	100	0,109	0,120	0,122	90%	91%
			500	0,081	0,073	0,071	90%	90%
			1000	0,044	0,042	0,042	91%	92%
	Pisah	Tindih 1	100	0,104	0,110	0,114	90%	90%
			500	0,075	0,073	0,072	92%	94%
			1000	0,041	0,043	0,043	89%	92%
		Gerombol	100	0,085	0,088	0,087	96%	98%
			500	0,062	0,062	0,061	98%	97%
			1000	0,034	0,035	0,034	96%	97%
Pisah	3	Dekat	100	0,072	0,072	0,072	100%	100%
			500	0,053	0,053	0,053	100%	100%
	Jauh	Sedang	1000	0,029	0,029	0,029	100%	100%

Lanjutan Lampiran 2

(b) Skenario Bangkitan Data Simulasi untuk Persentase Pencilan 10%

Pencilan	Kondisi	Jarak	Jumlah amatan	Rasio Simpangan Baku		Akurasi	
				Data Awal	CLARA	FCM	CLARA
10%	10%	3 Gerombol	100	0,281	0,344	0,311	48%
			Dekat	0,199	0,155	0,153	47%
			1000	0,110	0,105	0,104	52%
		Tumpang Tindih	100	0,228	0,314	0,298	52%
			Sedang	0,168	0,139	0,134	62%
			1000	0,090	0,091	0,091	62%
		2 Gerombol	100	0,194	0,256	0,265	63%
			Jauh	0,142	0,128	0,123	72%
			1000	0,077	0,080	0,081	72%
		1 Gerombol	100	0,224	0,320	0,279	67%
			Dekat	0,159	0,125	0,125	73%
			1000	0,088	0,092	0,089	72%
		Pisah	Tumpang	0,185	0,253	0,242	75%
			Tindih 1	0,132	0,113	0,109	83%
			Gerombol	0,072	0,073	0,073	82%
		3 Gerombol	Pisah	0,154	0,171	0,180	92%
			Jauh	0,112	0,101	0,100	89%
			1000	0,061	0,060	0,061	92%
		3 Gerombol	100	0,186	0,229	0,216	84%
			Dekat	0,134	0,133	0,131	90%
			1000	0,074	0,077	0,077	90%
		Pisah	100	0,154	0,162	0,162	96%
			Sedang	0,110	0,110	0,110	98%
			1000	0,061	0,061	0,061	97%
		Pisah	100	0,125	0,126	0,126	100%
			Jauh	0,095	0,095	0,095	100%
			1000	0,051	0,051	0,051	100%

Lanjutan Lampiran 2

(c) Skenario Bangkitan Data Simulasi untuk Persentase Pencilan 20%

Pencilan	Kondisi	Jarak	Jumlah amatan	Rasio Simpangan Baku		Akurasi	
				Data Awal	CLARA	FCM	CLARA
20%	20%	3 Gerombol	100	0,216	0,304	0,297	52% 56%
			Dekat	500	0,159	0,145	0,137 73% 73%
				1000	0,086	0,093	0,092 67% 71%
		Tumpang	100	0,253	0,336	0,300	43% 47%
			Sedang	500	0,186	0,153	0,140 53% 56%
			Tindih	1000	0,102	0,111	0,100 51% 51%
		2 Gerombol	100	0,213	0,281	0,288	58% 61%
			Jauh	500	0,158	0,142	0,138 71% 73%
				1000	0,086	0,089	0,090 70% 73%
		1 Gerombol	100	0,271	0,310	0,299	49% 57%
			Dekat	500	0,188	0,139	0,135 56% 60%
				1000	0,103	0,101	0,100 52% 68%
20%	20%	Tumpang	100	0,217	0,312	0,284	60% 75%
			Sedang	500	0,156	0,144	0,133 74% 81%
			Tindih	1000	0,085	0,093	0,087 75% 85%
		Gerombol Pisah	100	0,184	0,219	0,224	84% 90%
			Jauh	500	0,132	0,123	0,119 92% 93%
				1000	0,072	0,073	0,074 85% 87%
		3 Gerombol	100	0,234	0,275	0,266	52% 63%
			Dekat	500	0,167	0,119	0,120 61% 67%
				1000	0,092	0,079	0,098 55% 87%
		Pisah	100	0,189	0,232	0,208	71% 91%
			Sedang	500	0,138	0,138	0,137 97% 97%
				1000	0,076	0,076	0,076 99% 99%
		Pisah	100	0,161	0,163	0,164	99% 100%
			Jauh	500	0,118	0,118	0,118 100% 100%
				1000	0,064	0,064	0,064 99% 99%

Lampiran 3 Hasil Analisis ANOVA dengan Metode CLARA Terhadap (a) Rasio Simpangan Baku dan (b) Akurasi Penggerombolan

(a) Rasio Simpangan Baku

	Est.	df1	df2	p-value
Pencilan	1575,14	1,93	2204,66	0,0000
Jumlah amatan	9629,96	1,15	2204,66	0,0000
Jarak antar pusat gerombol	672,98	1,88	2204,66	0,0000
Kondisi tumpang tindih	1570,61	1,86	2204,66	0,0000
Pencilan * Jumlah amatan	195,25	2,21	2204,66	0,0000
Pencilan * Jarak antar pusat gerombol	46,34	3,60	2204,66	0,0000
Jumlah amatan * Jarak antar pusat gerombol	185,84	2,17	2204,66	0,0000
Pencilan * Kondisi tumpang tindih	67,15	3,59	2204,66	0,0000
Jumlah amatan * Kondisi tumpang tindih	376,68	2,14	2204,66	0,0000
Jarak antar pusat gerombol* Kondisi tumpang tindih	13,24	3,49	2204,66	0,0000
Pencilan * Jumlah amatan * Jarak antar pusat gerombol	8,00	4,14	2204,66	0,0000
Pencilan * Jumlah amatan * Kondisi tumpang tindih	17,38	4,11	2204,66	0,0000
Pencilan * Jarak antar pusat gerombol* Kondisi tumpang tindih	8,65	6,66	2204,66	0,0000
Jumlah amatan * Jarak antar pusat gerombol* Kondisi tumpang tindih	8,20	4,02	2204,66	0,0000
Pencilan * Jumlah amatan * Jarak antar pusat gerombol* Kondisi tumpang tindih	7,11	7,66	2204,66	0,0000

Lanjutan Lampiran 3

(b) Akurasi Penggerombolan

	Est.	df1	df2	<i>p-value</i>
Pencilan	171,15	2,00	5330,00	0,0000
Jumlah amatan	96,48	1,99	5330,00	0,0000
Jarak antar pusat gerombol	741,09	2,00	5330,00	0,0000
Kondisi tumpang tindih	1808,58	1,75	5330,00	0,0000
Pencilan * Jumlah amatan	14,75	3,98	5330,00	0,0000
Pencilan * Jarak antar pusat gerombol	23,32	3,99	5330,00	0,0000
Jumlah amatan * Jarak antar pusat gerombol	5,37	3,98	5330,00	0,0002
Pencilan * Kondisi tumpang tindih	47,12	3,49	5330,00	0,0000
Jumlah amatan * Kondisi tumpang tindih	5,98	3,49	5330,00	0,0002
Jarak antar pusat gerombol* Kondisi tumpang tindih	46,11	3,44	5330,00	0,0000
Pencilan * Jumlah amatan * Jarak antar pusat gerombol	2,98	7,94	5330,00	0,0025
Pencilan * Jumlah amatan * Kondisi tumpang tindih	1,32	6,95	5330,00	0,2370
Pencilan * Jarak antar pusat gerombol * Kondisi tumpang tindih	58,86	6,80	5330,00	0,0000
Jumlah amatan * Jarak antar pusat gerombol* Kondisi tumpang tindih	2,23	6,85	5330,00	0,0299
Pencilan * Jumlah amatan * Jarak antar pusat gerombol * Kondisi tumpang tindih	3,99	13,50	5330,00	0,0000