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Lampiran 1 Data Mentah Gempa Bumi USGS

#	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	
1	time	latitude	longitude	depth	mag	magType	nst	gap	dmin	rms	net	id	updated	distance	type	horizontal	depthError	magError	magNst	status	locationSm	
2	1917-01-2	-8.492	115.198	15	6.54	mw											13	0.2		reviewed	iscgem	
3	1972-09-C	-5.754	130.547	87.5	5.76	mw											30.5	0.2		reviewed	iscgem	
4	2010-04-C	2.383	97.048	31	7.8	mwc	352	19.2			1.19	us	usp000ha	2022-05-C	75	earthquake				reviewed	us	
5	2007-09-1	-4.438	101.367	34	8.4	mw	411	32.3			1.03	official	official20	2022-07-1	122	earthquake				reviewed	us	
6	1915-08-1	-2.815	118.142	35	6.28	mw											25	0.2		reviewed	iscgem	
7	1906-06-C	-2.495	138.56	35	7.84	mw											20.5	0.2		reviewed	iscgem	
8	1957-06-2	-1.723	136.592	59.1	7.1	mw											5.2	0.4		reviewed	iscgem	
9	1914-05-2	-1.98	136.944	15	8.15	mw											25	0.47		reviewed	iscgem	
10	1915-04-C	1.363	97.121	35	6.24	mw											3.8	0.35		reviewed	iscgem	
11	1967-11-2	-8.046	112.981	145	5.72	mw											34.5	0.9		reviewed	iscgem	
12	1914-07-C	-2.022	136.619	15	6.46	mw											25	0.2		reviewed	iscgem	
13	2002-10-1	-1.757	134.297	10	7.6	mwc	375			1.15	us	usp000be	2022-05-C	102	earthquake				reviewed	us		
14	1971-09-3	-5.524	131.372	41.4	5.68	mw											26.1	0.39		reviewed	iscgem	
15	1944-09-1	-8.608	108.046	35	6.3	mw											22	0.38		reviewed	iscgem	
16	1926-06-2	-0.613	100.025	35	6.4	mw											8.2	0.2		reviewed	iscgem	
17	2023-08-C	1.7884	126.287	51.842	4.1	mb		12	141	1.478	0.63	us	us6000ka	2023-08-2	134	earthquake	11.46	11.324	0.197	8	reviewed	us
18	2016-03-C	-4.9521	94.3299	24	7.8	mww			20	7.009	1.14	us	us1000au	2022-08-C	678	earthquake	7.5	1.8		reviewed	us	
19	2006-03-1	-9.595	127.214	30.1	6.7	mb	306	21.3			1.17	us	usp000cc	2022-05-C	108	earthquake				reviewed	us	
20	1925-07-1	-3.93	136.911	35	6.16	mw											8.8	0.46		reviewed	iscgem	
21	1968-08-1	0.157	119.802	20	7.21	mw											11.8	0.28		reviewed	iscgem	
22	1916-07-2	9.175	97.963	15	6.09	mw											25	0.53		reviewed	iscgem	

Lampiran 2 Data Mentah Gempa Bumi Menyebabkan Tsunami NOAA

Year	Mo	Dy	Hr	Mn	Sec	Tsunami Event	Tsunami	C Earthquake	Vol	More Info	Deposits	Country	Location	N Latitude	Longitude	Maximum	Number of Tsunami	I Tsunami	N Tsunami	I Deaths	Death D
1900	10	7	21		4		3	1	6.9			0	INDONESIA	BISMARCI	-4	140	4	1	1.5	5	
1903	3	30					2	1	6.5			0	INDONESIA	BANDA SI	-3	127.5	1	2	-0.5	0	
1907	1	4	5	19	13.2		4	1	8.2			0	INDONESIA	NW SUM	2.681	95.53	15	88	1.5	2	2188
1907	3	29	20	46	30		1	1	7.3			0	INDONESIA	KARAKEL	3	122	4	1	2	2	
1908	2	6					3	1	7.5			0	INDONESIA	SW SUM	-2	100	1.4	1	0.5	1	
1908	3	23	12	20			-1	1	6.6			0	INDONESIA	TIMOR SE	-10	129		1			
1909	6	3	18	40	48		2	1	7.6			0	INDONESIA	SUMATRA	-2	101	4	0.5	1		
1910	12	18	2	42			2	1	6.7			0	INDONESIA	SULAWES	4	127	1		-1.3	-1	
1914	5	26	14	22	47.7		4	1	8.1			0	INDONESIA	NW IRIAN	-1.829	136.943	0.1	5	1.5	2	
1914	6	25	19	7	25.9		2	1	7.6			0	INDONESIA	INDONESIA	-3.924	101.82		1			
1915	11	6					2	1	6			0	INDONESIA	NW IRIAN	-1	136		1			0
1917	1	20	23	11	34		3	1	6.6			0	INDONESIA	BALI SEA	-7	116	2	2	1		
1921	5	14	11	17	45		2	1	6.2			0	INDONESIA	MAKASSA	0.7	117.9	1	1		0.5	
1921	9	11	4	1	38		4	1	7.5			0	INDONESIA	JAWA	-11	111	0.1	3	-2.3	-2	
1926	6	28	3	23	27.5		0	1	6.6			0	INDONESIA	SW SUM	0.059	101.419		1		0	
1927	12	1	4	37	27		3	1	6.3			0	INDONESIA	SULAWES	-0.7	119.7	15	2	3.9	3	50
1930	6	19	13	7	27		3	1	6			0	INDONESIA	SOUTH OF	-5.6	105.3	1.5	1	-0.5		
1930	7	19	15	20	12		2	1	6.5			0	INDONESIA	SOUTH OF	-9.3	114.3	0.1	1	-3.3		
1931	9	25	5	59	44		3	1	7.4			0	INDONESIA	SW SUM	-5	102.75	1	1	4.9		
1932	9	9	13	38	52		2	1	6.2			0	INDONESIA	BANDA SI	-3.57	128.35		2		0	
1935	11	25	10	3	3		2	1	6.5			0	INDONESIA	CELEBES	5.5	94		0			
1935	12	28	2	35	0		1	1	7.9			0	INDONESIA	SW SUM	0.001	98.25		0			
1936	4	1	2	9	15		4	1	7.7			0	INDONESIA	SULAWES	4.5	126.5	3	2	1.5	2	
1936	8	23	21	12	13		2	1	7.3			0	INDONESIA	OFF NORI	6.1	94.7		0			
1937	11	6					2	1	6			0	INDONESIA	BANDA SI	-3	132.3	0.5	1	-1		
1938	2	1	19	4	22		4	1	8.6			0	INDONESIA	BANDA SI	-5.045	131.614	1	5	1	1.5	
1938	2	13					2	1	6			0	INDONESIA	BANDA SI	-3	132.3	0.5	1		-0.5	
1938	5	19	17	8	21		4	1	7.6			0	INDONESIA	MAKASSA	-1	120	3	6	1.6		17
1939	12	21	21	0	40		3	1	8			0	INDONESIA	N MOLUC	0	123		2			
1948	6	1	18	58	18		3	1	6.3			0	INDONESIA	OFF NORI	6	95		1	-0.5	0	

Lampiran 3 Tabel Hasil Prediksi ANFIS Menggunakan Input Data Historis

Depth	Magnitude	Distance	Actual Output	Predicted Output
0.03379	0.83333	0.14053	1.00000	0.98088
0.05068	0.71852	0.10947	0.50000	0.79250
0.05068	0.51852	0.20266	0.50000	0.66395
0.01689	0.82407	0.18935	1.00000	1.07319
0.05068	0.71296	0.10503	0.50000	0.79119
0.03379	0.73333	0.05030	0.75000	0.78370
0.01689	0.52593	0.00740	0.75000	0.71816
0.05068	0.52222	0.25148	0.50000	0.73022
0.01689	0.71852	0.34172	1.00000	0.97009
0.01689	0.66111	0.08580	0.75000	0.81018
0.01689	0.53333	0.07101	0.00000	0.69103
0.01689	0.62037	0.08728	0.75000	0.82100
0.02534	0.46481	0.07988	0.75000	0.62720

<i>Depth</i>	<i>Magnitude</i>	<i>Distance</i>	<i>Actual Output</i>	<i>Predicted Output</i>
0.05068	0.45185	0.03107	0.75000	0.64630
0.05068	0.67407	0.23521	0.75000	0.83472
0.03379	0.48333	0.03402	0.50000	0.64946
0.02534	0.70741	0.06805	0.75000	0.78621
0.05068	0.48889	0.26923	0.50000	0.70948
0.04223	0.72222	0.31065	0.25000	0.80394
0.05068	0.75000	0.05178	1.00000	0.79507
0.07602	0.59815	0.10799	0.50000	0.73520
0.03379	0.88889	0.20562	1.00000	1.09581
0.05068	0.74074	0.17456	1.00000	0.81560
0.24495	0.81481	0.09763	0.75000	0.73369
0.05068	0.69074	0.04586	0.75000	0.78668
0.12670	0.44444	0.13166	0.50000	0.51171
0.00845	0.74630	0.03550	0.75000	0.79966
0.01689	0.72222	0.00444	0.75000	0.81401
0.10136	0.48333	0.09615	0.75000	0.54126
0.07602	0.50185	0.10355	0.50000	0.56454
0.02534	0.66667	0.07840	0.75000	0.79686
0.09139	0.62963	0.11834	0.75000	0.77674
0.08447	0.38333	0.05178	0.75000	0.64803
0.02534	0.44444	0.15237	0.50000	0.60488
0.05068	0.38889	0.25000	0.50000	0.59480
0.06757	0.51296	0.06213	0.50000	0.60037
0.18582	0.55185	0.14349	0.50000	0.51752
0.16048	0.44444	0.10947	0.50000	0.53229
0.02534	0.83333	0.40385	1.00000	0.94818
0.13582	0.49074	0.13609	0.50000	0.49967
0.07602	0.55556	0.01183	0.75000	0.66075
0.03041	0.72407	0.20414	1.00000	0.89896
0.02534	0.65000	0.17160	1.00000	0.90023
0.26353	0.33889	0.21893	0.25000	0.28798
0.01689	0.61667	0.05325	1.00000	0.81497
0.35104	0.34815	0.22929	0.25000	0.25036

<i>Depth</i>	<i>Magnitude</i>	<i>Distance</i>	<i>Actual Output</i>	<i>Predicted Output</i>
0.15660	0.48704	0.13018	0.50000	0.49862
0.24326	0.31481	0.22485	0.25000	0.27801
0.15204	0.42593	0.14201	0.50000	0.49577
0.03379	0.85370	0.38905	1.00000	1.01466
0.04730	0.22222	0.46302	0.00000	-0.00317
0.30407	0.24074	0.24556	0.25000	0.25020
0.36320	0.25926	0.22189	0.25000	0.24862
0.24833	0.31481	0.22041	0.25000	0.28098
0.59801	0.11111	0.42456	0.00000	-0.00200
0.00000	0.77778	0.07840	1.00000	0.85652
0.44935	0.14815	0.39053	0.00000	0.04400
0.35982	0.25926	0.22337	0.25000	0.24867
0.22890	0.25926	0.22041	0.25000	0.25218
0.25323	0.35185	0.25888	0.25000	0.25930
0.07990	0.31481	0.03402	0.50000	0.55681
0.23397	0.25926	0.32249	0.25000	0.25893
0.04730	0.50000	0.11538	0.25000	0.59959
0.35306	0.24074	0.35059	0.25000	0.21943
0.36861	0.24074	0.30325	0.25000	0.22549
0.02010	0.55556	0.06953	1.00000	0.71602
0.20272	0.46296	0.10355	0.50000	0.54165
0.04730	0.61111	0.02367	0.25000	0.78297
0.64700	0.20370	0.37278	0.00000	-0.01059
0.15863	0.40741	0.13166	0.50000	0.51188
0.28887	0.24074	0.24112	0.25000	0.24998
0.37840	0.24074	0.20858	0.25000	0.24917
0.22975	0.24074	0.31657	0.25000	0.25122
0.34817	0.25926	0.23521	0.25000	0.24564
0.35154	0.25926	0.21893	0.25000	0.25341
0.27316	0.25926	0.31657	0.25000	0.25155
0.50949	0.20370	0.36982	0.00000	0.05211
0.16589	0.46296	0.11095	0.50000	0.52187
0.25171	0.31481	0.31805	0.25000	0.25008

<i>Depth</i>	<i>Magnitude</i>	<i>Distance</i>	<i>Actual Output</i>	<i>Predicted Output</i>
0.38330	0.25926	0.21598	0.25000	0.24648
0.34732	0.31481	0.22189	0.25000	0.25203
0.26421	0.29630	0.27367	0.25000	0.24359
0.33803	0.24074	0.26036	0.25000	0.24429
0.03835	0.75926	0.05178	0.75000	0.79422
0.12822	0.44444	0.12278	0.50000	0.52020
0.02517	0.61111	0.05030	1.00000	0.80239
0.14342	0.42593	0.14201	0.50000	0.49850
0.02264	0.75926	0.36538	1.00000	0.87321
0.03531	0.53704	0.34467	1.00000	0.82223
0.01047	0.51852	0.40385	0.50000	0.67486
0.03531	0.44444	0.33432	1.00000	0.75452
0.01960	0.57407	0.32988	1.00000	0.95630
0.60089	0.22222	0.35207	0.00000	0.01243
0.03210	0.77778	0.26479	1.00000	0.95593
0.04730	0.81296	0.14645	1.00000	0.91908
0.18667	0.50000	0.17899	0.50000	0.46720
0.24681	0.40741	0.21302	0.25000	0.35456
0.56085	0.14815	0.41864	0.00000	-0.01356
0.41388	0.18519	0.42751	0.00000	0.01545
0.17856	0.46296	0.11686	0.50000	0.51756
0.64261	0.16667	0.36243	0.00000	-0.01032
0.73518	0.14815	0.43787	0.00000	0.01408
0.04730	0.74074	0.38757	0.50000	0.55485
0.61119	0.00000	0.38314	0.00000	0.00734
0.49834	0.00000	0.36982	0.00000	-0.00746
0.16285	0.50000	0.11391	0.50000	0.51279
0.29968	0.27778	0.27071	0.25000	0.24052
0.38989	0.27778	0.21450	0.25000	0.24494
0.03548	0.72222	0.12870	1.00000	0.80904
0.93250	0.11111	0.41864	0.00000	-0.00569
0.56913	0.18519	0.42308	0.00000	-0.01487
0.17636	0.42593	0.18935	0.50000	0.42607

<i>Depth</i>	<i>Magnitude</i>	<i>Distance</i>	<i>Actual Output</i>	<i>Predicted Output</i>
0.35188	0.25926	0.22929	0.25000	0.24752
0.97186	0.12963	0.37426	0.00000	0.00349
0.27468	0.24074	0.34615	0.25000	0.24601
0.49834	0.05556	0.40680	0.00000	-0.00826
0.00845	0.72222	0.14793	0.25000	0.87145
0.04223	0.68519	0.07101	0.75000	0.78416
0.12518	0.42593	0.13905	0.50000	0.50984
0.02095	0.55556	0.15533	1.00000	0.73360
0.51963	0.09259	0.42899	0.00000	-0.01528
0.00845	0.70370	0.00000	1.00000	0.83115
0.00845	0.62963	0.03994	0.75000	0.82933
0.04223	1.00000	0.10947	1.00000	1.08656
0.04223	0.90741	0.11243	1.00000	1.01373
0.02365	0.55556	0.16420	1.00000	0.73593
0.28786	0.27778	0.26775	0.25000	0.24353
0.04240	0.55556	0.15680	0.75000	0.68650
0.58281	0.07407	0.41420	0.00000	0.00299
0.89381	0.16667	0.41864	0.00000	0.00043
0.86915	0.16667	0.41864	0.00000	0.00257
0.02534	0.74074	0.33136	1.00000	0.90960
0.29293	0.33333	0.29142	0.25000	0.22714
0.51558	0.07407	0.41864	0.00000	-0.00978
0.16184	0.42593	0.17308	0.50000	0.45219
0.04899	0.87037	0.17751	1.00000	0.98978
0.03548	0.68519	0.07988	0.75000	0.78737
0.03379	0.64815	0.23964	1.00000	0.94169
0.15373	0.53704	0.10503	0.50000	0.53291
0.04223	0.68519	0.19675	1.00000	0.86336
0.02027	0.74074	0.20414	1.00000	0.93009
0.03041	0.68519	0.12426	0.75000	0.81804
0.23448	0.33333	0.25888	0.25000	0.26289
0.02534	0.64815	0.04142	1.00000	0.80073
0.14866	0.42593	0.18491	0.50000	0.44821

<i>Depth</i>	<i>Magnitude</i>	<i>Distance</i>	<i>Actual Output</i>	<i>Predicted Output</i>
0.02534	0.55556	0.16272	1.00000	0.73048
0.06926	0.61111	0.09467	1.00000	0.76419
0.12839	0.72222	0.04142	1.00000	0.98142
0.17011	0.42593	0.19083	0.50000	0.42790
0.70849	0.16667	0.35355	0.00000	-0.00645
0.23802	0.24074	0.28107	0.25000	0.24706
0.04392	0.75926	0.10799	1.00000	0.79794
0.22806	0.35185	0.29586	0.25000	0.26666
0.05575	0.64815	0.06361	0.75000	0.78153
0.19427	0.46296	0.18047	0.50000	0.44853
0.02551	0.75926	0.31509	1.00000	0.93591
0.75529	0.18519	0.39349	0.00000	-0.00495
0.37874	0.29630	0.21450	0.25000	0.24855
0.78215	0.18519	0.35207	0.00000	0.00496
0.51993	0.07407	0.39053	0.00000	0.00002
0.90947	0.11111	0.40385	0.00000	-0.00102
0.06757	0.62963	0.22633	0.75000	0.75804
0.68005	0.09259	0.39201	0.00000	0.00011
0.03210	0.75926	1.00000	1.00000	1.00162
0.56646	0.05556	0.42604	0.00000	0.00673
0.65790	0.05556	0.36095	0.00000	-0.00082
0.72132	0.07407	0.40976	0.00000	0.01431
0.79509	0.07407	0.36982	0.00000	0.00261
1.00000	0.12963	0.38609	0.00000	0.00021
0.01520	0.50000	0.04586	0.75000	0.67328
0.04899	0.59259	0.05030	1.00000	0.75208
0.01858	0.48148	0.02515	0.75000	0.67521
0.22904	0.24074	0.23373	0.25000	0.23416
0.07433	0.59259	0.22189	0.50000	0.71983
0.04730	0.62963	0.20562	1.00000	0.86281
0.90354	0.05556	0.39645	0.00000	-0.00177
0.19718	0.44444	0.15680	0.50000	0.46997
0.51661	0.11111	0.38462	0.00000	0.00806

<i>Depth</i>	<i>Magnitude</i>	<i>Distance</i>	<i>Actual Output</i>	<i>Predicted Output</i>
0.18221	0.50000	0.19379	0.50000	0.45986
0.17569	0.42593	0.14053	0.50000	0.49366
0.28211	0.40741	0.28254	0.25000	0.28031
0.50088	0.09259	0.38609	0.00000	0.00704
0.67572	0.05556	0.38018	0.00000	0.00287
0.01566	0.66667	0.07101	1.00000	0.80475
0.51552	0.05556	0.41568	0.00000	-0.00764
0.66592	0.11111	0.39941	0.00000	-0.00265
0.16885	0.72222	0.14497	1.00000	0.90059
0.13345	0.44444	0.11095	0.50000	0.53187
0.87944	0.05556	0.43787	0.00000	0.00229
0.04899	0.62963	0.25000	1.00000	0.85658