

LAMPIRAN A

**FORMULIR PEMBIMBINGAN SKRIPSI/TA**

SPT-I/03/SOP-28/F-03

Nama Mahasiswa : Zhia Unnahar
Prodi/NIM : Teknik Sipil / 2018091020
Judul Skripsi/TA yang diajukan : Model Prediksi Kuat Tekan Beton Menggunakan Jaringan Saraf Tiruan dengan Algoritma Propagasi Balik

No	Tanggal	Materi Pembimbingan	Paraf Mhs	Paraf Dosen Pembimbing
1	25 - 08 - 2021	Pembahasan Topik Skripsi		
2	30 - 08 - 2021	Asistensi BAB I - III		
3	23 - 09 - 2021	Asistensi BAB I - III Lanjut		
4	24 - 11 - 2021	Review Bab I dan Data Penelitian		
5	01 - 12 - 2021	Review BAB II - III		
6	17 - 12 - 2021	Review BAB IV		
7	24 - 12 - 2021	Revisi BAB I - V		
8	25 - 12 - 2021	Menyerahkan Revisi Final Laporan		

* Jika pembimbingan lebih dari minimal 8 kali, mohon membuat salinan formulir ini

Mahasiswa	Dosen Pembimbing 1	Dosen Pembimbing 2



Universitas
Pembangunan Jaya

FORMULIR PEMBIMBINGAN SKRIPSI/TA

SPT-I/03/SOP-28/F-03

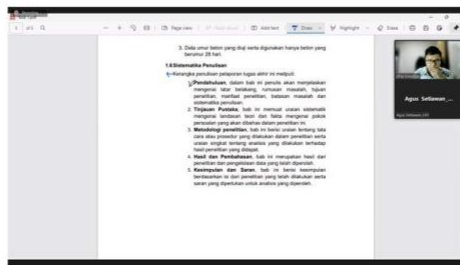
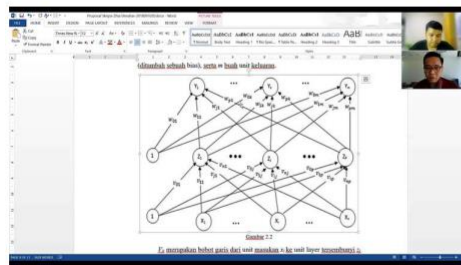
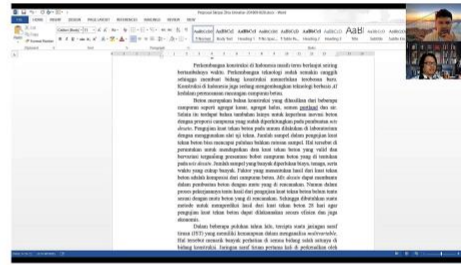
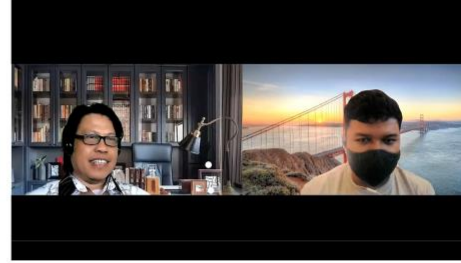
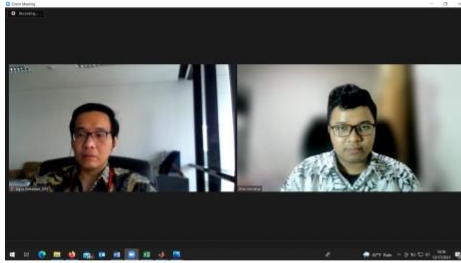
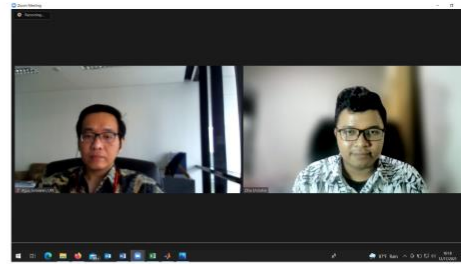
Nama Mahasiswa : Zhia Unnahar
 Prodi/NIM : Teknik Sipil / 2018091020
 Judul Skripsi/TA yang diajukan : Model Prediksi Kuat Tekan Beton Menggunakan Jaringan Saraf Tiruan dengan Algoritma Propagasi Balik

No	Tanggal	Materi Pembimbingan	Paraf Mhs	Paraf Dosen Pembimbing
1	27 - 09 - 2021	Asistensi BAB I - III Awal		
2	21 - 11 - 2021	Review Abstraks		
3	24 - 11 - 2021	Review Bab I dan Data Penelitian		
4	01 - 12 - 2021	Review BAB II		
5	02 - 12 - 2021	Review BAB III		
6	24 - 12 - 2021	Revisi BAB I - V		
7	25 - 12 - 2021	Menyerahkan Revisi Final Laporan		
8				

* Jika pembimbingan lebih dari minimal 8 kali, mohon membuat salinan formulir ini

Mahasiswa	Dosen Pembimbing 1	Dosen Pembimbing 2

LAMPIRAN B



Data Sekunder Komposisi Campuran Beton

No	Sumber Data	Proporsi Campuran Beton 1 m ³					Tekan 28 hari (Mpa)
		Air (L)	Semen (kg)	Agregat Kasar (Kg)	Agregat Halus (Kg)	Rasio Air Semen (W/C)	
1	Laporan Praktikum Material Konstruksi Kelompok 3	228	373.77	437.311	437.311	0.61	22.45
2	Diklat Perkerasan Kaku, Modul 3 Rancangan Campuran Beton	155.62	283	1288	653.6	0.55	22.5
3	Jurnal <i>Mix Design</i> SKSNI Menggunakan Material Agregat Kasar dan Halus dengan Berat Jenis Rendah	190	316.67	1152.68	620.67	0.60	22.55
4	Laporan Praktikum <i>Mix Design</i> Teknologi Beton, Institut Teknologi Sepuluh Nopember	205	383.18	1257.06	564.76	0.53	26.682
5	Artikel Bangunan Tahan Gempa, Link : https://artcivcad.blogspot.com/2016/04/bangunan-tahan-gempa.html	215	326	1029	760	0.66	14.5
6		215	352	1031	731	0.61	16.9
7		215	371	1047	698	0.58	19.3
8		215	384	1039	692	0.56	21.7
9		215	406	1026	684	0.53	24
10		215	413	1021	681	0.52	26.4
11		215	439	1006	670	0.49	28.8
12		215	448	1000	667	0.48	31.2
13	Jurnal Kajian Kuat Tekan Beton Normal Menggunakan Standar SNI 7626-2012 Dan ASTM C 136-06	255.71	390	1031.95	629.72	0.66	26.06
14		210	390	1039.5	696	0.54	26.24
15	Jurnal Perbandingan Tekan Beton Normal dan Beton dengan Bahan Additive Silica Fume antara Uji Non Destructive dengan Uji Destructive	192.616	428.036	1084.068	676.241	0.45	33.34
16		192.616	385.232	1084.068	719.044	0.50	30.73
17		192.616	350.211	1084.068	754.065	0.55	23.754
18	Jurnal Analisis Campuran Beton Berpori dengan Agregat Bergradasi Terpisah Ditinjau Terhadap Mutu dan Biaya	156.25	438	1237	519.18	0.36	31.09
19	Jurnal Perbandingan Desain Campuran Beton Normal Menggunakan SNI 03-2834-2000 dan SNI 7656:2012	214.9	358.167	1014.231	792.882	0.60	18.117
20		214.9	390.727	1020.264	754.109	0.55	23.779
21		214.9	429.8	1006.474	728.826	0.50	27.837
22		194.9	324.833	1150.214	720.053	0.60	17.174
23		194.9	354.364	1141.256	699.48	0.55	22.458
24		194.9	389.8	1146.366	658.935	0.50	27.082
25		205	259.494	1010	870.506	0.79	16.702
26		205	297.101	1010	832.899	0.69	21.42
27		205	336.066	1010	793.934	0.61	26.138
28		181	229.114	1204.939	794.947	0.79	15.146
29		181	262.319	1204.939	761.742	0.69	20.948
30		181	296.721	1204.939	727.34	0.61	25.761
31	Jurnal Kuat Tekan Beton dengan Bahan Tambah Serbuk Kaca sebagai Substitusi Parsial Semen	203	388	848	735	0.52	26.23
32	Pengaruh Kandungan Kimia Air Terhadap Kuat Tekan Beton	186.76	358.26	1017.82	832.76	0.52	20.95

33	Analisis Kuat Tekan dan Porositas Beton dengan Menggunakan Limbah Industri Besi dan Batu Kapur	272.135	429.786	1285.603	758.224	0.63	39.2
34	Analisis Penambahan Cocofiber Pada Campuran Beton	225	459.18	993.5	662.32	0.49	30.018
35	Desain Campuran Dan Kuat Tekan Beton Memanfaatkan Pond Ash Dan Laterit Sebagai Pengganti Pasir	202.91	408.16	1124.33	664.59	0.50	26.09
36	Pengaruh Penambahan Pyrophyllite Terhadap Kuat Tekan Beton	225	460	987	658	0.49	25
37	Kuat Tekan Beton Normal dan Beton Mutu Tinggi Pada Perawatan Steam dan Perendaman	225	500	906.54	656.46	0.45	38
38	Perilaku Kuat Tekan Beton Normal Terhadap Penambahan Serat Botol Plastik Jenis PET	260.439	528.427	1132.34	749.233	0.49	22.25
39	Pengaruh Tinggi Sampel dengan Kuat Tekan Beton	210	500	1259.5	1030.5	0.42	15.45
40	Pengaruh Substitusi Agregat Buatan (Beton Daur Ulang) Terhadap Kuat Tekan Beton Normal	160.038	455.202	1111.02	619.958	0.35	30.01
41	Pengujian Kuat Tekan Beton Terhadap Penggunaan Cangkang Kemiri Pada Beton Ramah Lingkungan	167.44	372.1	1116.28	744.18	0.45	16.52
42		198.75	375.00	1,143.75	592.50	0.53	36.84
43		200.00	400.00	1,128.00	572.00	0.50	43.13
44		212.00	400.00	1,196.00	616.00	0.53	38.58
45		199.75	425.00	1,096.50	544.00	0.47	47.16
46		208.25	425.00	1,177.25	590.75	0.49	45.05
47		198.00	450.00	1,057.50	513.00	0.44	49.63
48		211.50	450.00	1,143.00	562.50	0.47	47.42
49		199.50	475.00	1,040.25	498.75	0.42	54.01
50		209.00	475.00	1,168.50	565.25	0.44	50.05
51		198.75	375.00	1,143.75	592.50	0.53	37.81
52		200.00	400.00	1,128.00	572.00	0.50	44.11
53		212.00	400.00	1,196.00	616.00	0.53	40.90
54		199.75	425.00	1,096.50	544.00	0.47	47.51
55		208.25	425.00	1,177.25	590.75	0.49	45.30
56		216.75	425.00	1,253.75	641.75	0.51	42.54
57		198.00	450.00	1,057.50	513.00	0.44	52.03
58		211.50	450.00	1,143.00	562.50	0.47	48.74
59		220.50	450.00	1,228.50	616.50	0.49	46.59
60		199.50	475.00	1,040.25	498.75	0.42	54.49
61		209.00	475.00	1,168.50	565.25	0.44	53.06
62		218.50	475.00	1,192.25	584.25	0.46	49.18
63		221.00	425.00	858.50	607.75	0.52	40.02
64		220.50	450.00	837.55	580.50	0.49	45.25

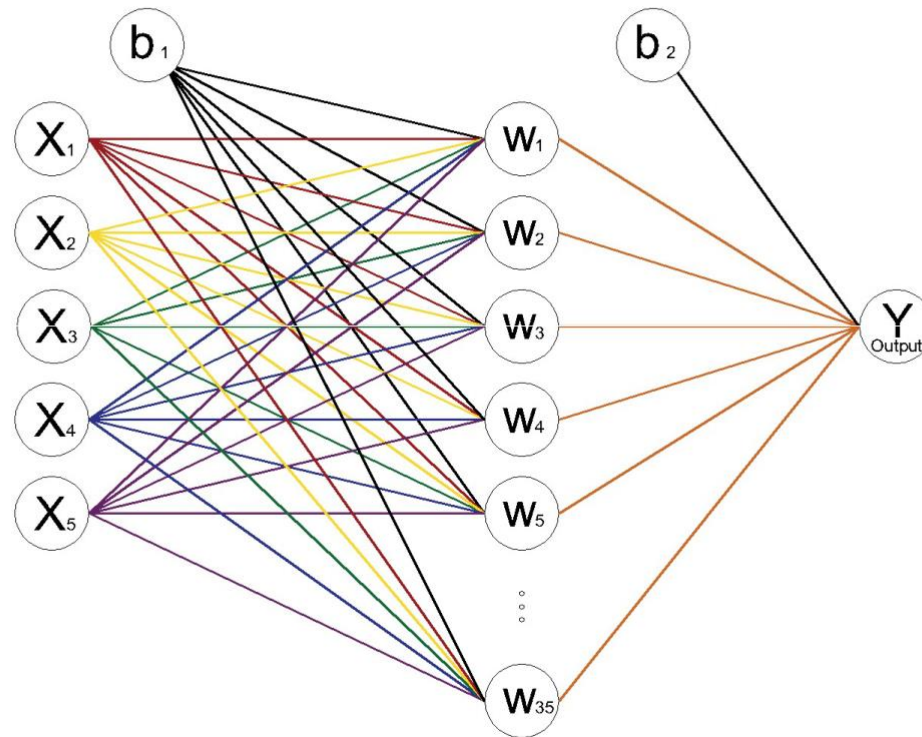
65		229.50	450.00	855.00	175.95	0.51	42.68
66	Chia-Ju Lin dan Nan-Jing Wu, 2021	218.50	475.00	817.00	555.75	0.46	48.67
67		228.00	475.00	869.25	598.50	0.48	45.52
68		178.50	350.00	1,141.00	486.50	0.51	39.52
69		189.00	350.00	1,197.00	521.50	0.54	31.66
70		180.00	375.00	1,121.25	468.75	0.48	42.73
71		191.25	375.00	1,196.25	506.25	0.51	40.69
72		180.00	400.00	1,080.00	440.00	0.45	47.99
73		192.00	400.00	1,168.00	484.00	0.48	44.89
74		178.50	425.00	1,049.75	416.50	0.42	51.25
75		191.25	425.00	1,139.00	463.25	0.45	49.05
76		189.00	450.00	1,102.50	441.00	0.42	53.69
77		189.00	350.00	1,197.00	521.50	0.54	36.64
78		191.25	375.00	1,196.25	506.25	0.51	41.57
79		192.00	400.00	1,168.00	484.00	0.48	46.22
80		191.25	425.00	1,139.00	463.25	0.45	50.35
81		189.00	450.00	1,102.50	441.00	0.42	54.11
82		198.75	375.00	903.75	551.25	0.53	37.30
83		200.00	400.00	884.00	528.00	0.50	44.04
84		212.00	400.00	944.00	576.00	0.53	39.61
85		199.75	425.00	862.75	505.75	0.47	47.37
86		208.25	425.00	926.50	548.25	0.49	44.69
87		198.00	450.00	837.00	481.50	0.44	50.93
88		211.50	450.00	900.00	526.50	0.47	48.08
89		199.50	475.00	798.00	451.25	0.42	54.14
90		209.00	475.00	874.00	503.50	0.44	51.31

Data Hasil Normalisasi (Logsig)

No	Proporsi Campuran Beton 1 m ³					Kuat Tekan 28 hari (Mpa)
	Air	Semen	Agregat Kasar	Agregat Halus	Rasio W/C	
1	0.60	0.49	0.10	0.34	0.57	0.26
2	0.10	0.24	0.90	0.55	0.46	0.26
3	0.34	0.33	0.77	0.52	0.55	0.26
4	0.44	0.51	0.87	0.46	0.43	0.34
5	0.51	0.36	0.66	0.65	0.66	0.10
6	0.51	0.43	0.66	0.62	0.57	0.15
7	0.51	0.48	0.67	0.59	0.52	0.20
8	0.51	0.51	0.67	0.58	0.48	0.24
9	0.51	0.57	0.65	0.58	0.42	0.29
10	0.51	0.59	0.65	0.57	0.41	0.34
11	0.51	0.66	0.63	0.56	0.35	0.39
12	0.51	0.69	0.63	0.56	0.33	0.43
13	0.79	0.53	0.66	0.52	0.65	0.33
14	0.47	0.53	0.67	0.59	0.44	0.33
15	0.35	0.63	0.71	0.57	0.28	0.48
16	0.35	0.52	0.71	0.61	0.37	0.42
17	0.35	0.42	0.71	0.64	0.46	0.29
18	0.10	0.66	0.85	0.42	0.11	0.43
19	0.51	0.44	0.64	0.68	0.55	0.17
20	0.51	0.53	0.65	0.64	0.46	0.29
21	0.51	0.64	0.64	0.62	0.37	0.37
22	0.37	0.36	0.77	0.61	0.55	0.15
23	0.37	0.43	0.76	0.59	0.46	0.26
24	0.37	0.53	0.77	0.55	0.37	0.35
25	0.44	0.18	0.64	0.75	0.90	0.14
26	0.44	0.28	0.64	0.72	0.72	0.24
27	0.44	0.39	0.64	0.68	0.57	0.33
28	0.27	0.10	0.82	0.68	0.90	0.11
29	0.27	0.19	0.82	0.65	0.72	0.23
30	0.27	0.28	0.82	0.62	0.57	0.33
31	0.43	0.52	0.49	0.62	0.41	0.33
32	0.31	0.45	0.65	0.71	0.41	0.23
33	0.90	0.64	0.90	0.65	0.61	0.59
34	0.58	0.71	0.62	0.56	0.35	0.41
35	0.42	0.58	0.75	0.56	0.37	0.33
36	0.58	0.72	0.62	0.55	0.35	0.31
37	0.58	0.82	0.54	0.55	0.28	0.57
38	0.82	0.90	0.75	0.64	0.36	0.26
39	0.47	0.82	0.87	0.90	0.22	0.12
40	0.13	0.70	0.73	0.52	0.10	0.41
41	0.18	0.48	0.74	0.63	0.28	0.14
42	0.40	0.49	0.76	0.49	0.43	0.55
43	0.40	0.56	0.75	0.47	0.37	0.67
44	0.49	0.56	0.81	0.51	0.43	0.58
45	0.40	0.62	0.72	0.44	0.32	0.75
46	0.46	0.62	0.80	0.49	0.35	0.71
47	0.39	0.69	0.68	0.42	0.26	0.80
48	0.48	0.69	0.76	0.46	0.32	0.76
49	0.40	0.76	0.67	0.40	0.22	0.89

50	0.47	0.76	0.79	0.46	0.26	0.81
51	0.40	0.49	0.76	0.49	0.43	0.57
52	0.40	0.56	0.75	0.47	0.37	0.69
53	0.49	0.56	0.81	0.51	0.43	0.63
54	0.40	0.62	0.72	0.44	0.32	0.76
55	0.46	0.62	0.80	0.49	0.35	0.72
56	0.52	0.62	0.87	0.54	0.39	0.66
57	0.39	0.69	0.68	0.42	0.26	0.85
58	0.48	0.69	0.76	0.46	0.32	0.78
59	0.55	0.69	0.84	0.51	0.35	0.74
60	0.40	0.76	0.67	0.40	0.22	0.90
61	0.47	0.76	0.79	0.46	0.26	0.87
62	0.53	0.76	0.81	0.48	0.30	0.79
63	0.55	0.62	0.50	0.50	0.41	0.61
64	0.55	0.69	0.48	0.48	0.35	0.72
65	0.61	0.69	0.49	0.10	0.39	0.66
66	0.53	0.76	0.46	0.46	0.30	0.78
67	0.60	0.76	0.51	0.50	0.33	0.72
68	0.26	0.42	0.76	0.39	0.39	0.60
69	0.33	0.42	0.81	0.42	0.44	0.44
70	0.27	0.49	0.74	0.37	0.33	0.66
71	0.34	0.49	0.81	0.41	0.39	0.62
72	0.27	0.56	0.70	0.35	0.28	0.77
73	0.35	0.56	0.79	0.39	0.33	0.71
74	0.26	0.62	0.68	0.33	0.22	0.84
75	0.34	0.62	0.76	0.37	0.28	0.79
76	0.33	0.69	0.73	0.35	0.22	0.88
77	0.33	0.42	0.81	0.42	0.44	0.54
78	0.34	0.49	0.81	0.41	0.39	0.64
79	0.35	0.56	0.79	0.39	0.33	0.73
80	0.34	0.62	0.76	0.37	0.28	0.82
81	0.33	0.69	0.73	0.35	0.22	0.89
82	0.40	0.49	0.54	0.45	0.43	0.56
83	0.40	0.56	0.52	0.43	0.37	0.69
84	0.49	0.56	0.58	0.47	0.43	0.60
85	0.40	0.62	0.50	0.41	0.32	0.76
86	0.46	0.62	0.56	0.45	0.35	0.70
87	0.39	0.69	0.48	0.39	0.26	0.83
88	0.48	0.69	0.54	0.43	0.32	0.77
89	0.40	0.76	0.44	0.36	0.22	0.89
90	0.47	0.76	0.51	0.41	0.26	0.84

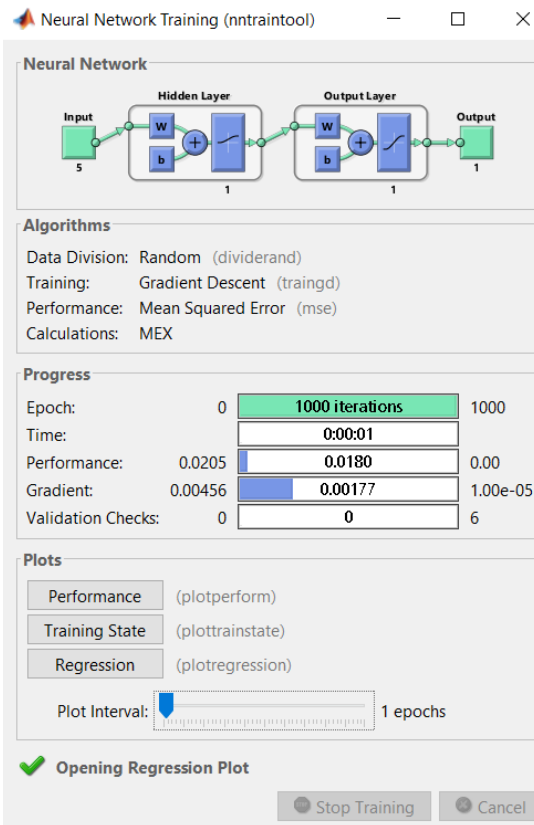
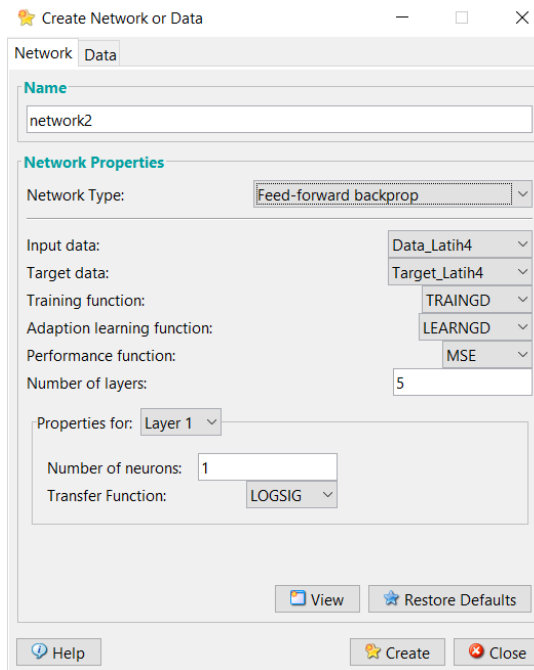
Arsitektur Jaringan Propagasi Balik



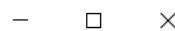
Koefisien Arsitektur Jaringan Backpropagation

Weight 1					Bias 1	Weight 2	Bias 2
X1	X2	X3	X4	X5	B1	X'	B2
2.5574	2.7890	2.7687	0.8948	2.9480	-5.7985	-0.4387	-1.9292
3.9965	1.9322	-2.4144	-2.3260	1.1990	-5.3819	0.2370	
-3.7891	-1.8241	3.2111	1.5870	-1.5226	4.9928	0.6632	
3.4182	3.7232	-2.1207	1.5651	0.1097	-4.6962	0.3016	
1.0852	-3.8059	3.5252	2.0274	-0.7857	-4.3492	0.4413	
-3.7700	-0.5725	-1.4058	-0.4629	-3.9728	4.0228	0.0316	
-2.1337	-1.0050	-2.9346	-3.7593	-2.3898	3.5674	-0.8749	
0.4407	2.5349	-2.3922	-2.6465	-3.6450	-3.2993	0.1502	
3.3999	2.2265	0.8245	3.0955	-2.3919	-3.0270	-0.6352	
3.5655	-2.4549	-0.1688	-3.0890	-2.3602	-2.5733	1.0474	
-3.6610	-0.2723	-1.6103	3.9761	-0.5916	2.3590	-0.7190	
3.6601	-0.3535	2.5311	0.3281	-3.5233	-2.1362	0.4772	
3.2064	1.0807	0.6025	3.5691	2.8435	-1.7616	0.4263	
-0.0478	1.8676	0.3100	-3.6873	3.9588	1.2409	0.8394	
3.0219	2.2035	4.5435	-0.8237	-0.0469	-0.2902	-1.3229	
-3.4846	-1.9175	-1.9186	-3.5476	-0.2002	0.4414	0.8410	
-0.6339	1.6925	2.5942	4.4841	-1.5047	0.2851	0.2084	
2.8998	0.9744	1.7665	-3.4943	2.8432	0.0868	0.3371	
3.3231	-3.4315	-1.3441	3.0648	-1.1253	0.0764	-1.2685	
3.3759	-2.7367	0.4870	2.3838	-2.8000	0.5720	-0.0320	
1.5613	-0.1863	-3.4394	3.1048	2.5406	1.3046	-0.6944	
-2.9149	2.8941	-2.8344	-2.6736	-0.7095	-1.2808	0.2074	
4.2164	-1.9409	0.3449	-1.1867	-3.0664	1.6846	0.2632	
4.3065	0.7527	2.6777	-2.3348	-0.8606	2.0571	0.6044	
1.3802	-2.2302	3.3126	2.3065	-3.0830	2.3914	0.8018	
2.2923	2.2709	-3.1185	-0.7240	-3.3661	2.7306	0.2446	
2.0355	-1.7705	0.3683	3.8012	3.7687	2.4155	-0.9208	
-1.2285	0.0230	-0.2399	-3.2238	4.5403	-3.2929	0.3976	
1.4373	1.9542	-4.7335	-2.1555	0.7029	3.5539	-0.2427	
-2.5410	2.8454	-1.1023	-2.5174	-3.2148	-4.1082	-1.0198	
1.9890	3.7782	-2.7668	-2.4988	-1.8896	3.9064	1.0069	
-3.7308	0.4502	2.3358	3.1884	-1.1232	-4.8645	0.4603	
-2.2505	-3.6398	-1.8579	0.7956	3.2154	-4.9971	0.1457	
-3.4566	-2.6885	0.2498	0.3562	-3.6796	-5.3287	-0.4341	
-2.8184	-1.7092	-2.3118	-2.4860	-3.1881	-5.6920	-0.1078	

Hasil Analisis Arsitektur Jaringan Tipe 1



Network: network2

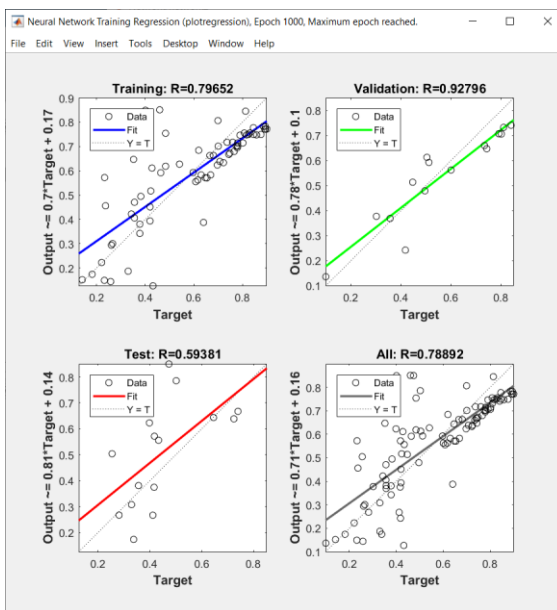
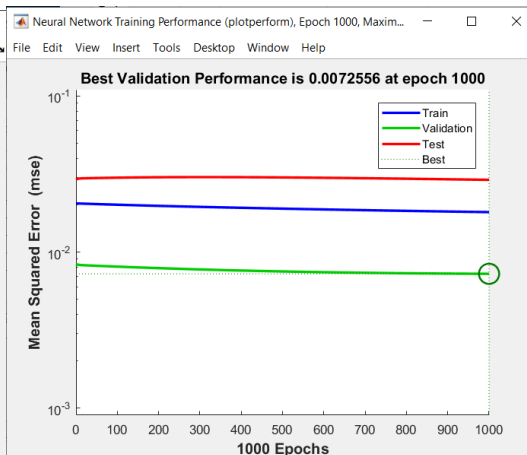
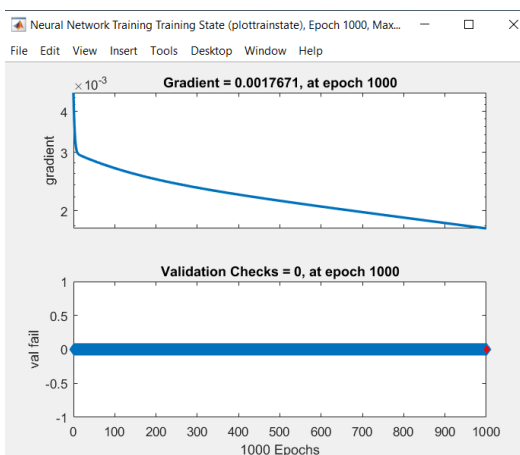


View **Train** Simulate Adapt Reinitialize Weights View/Edit Weights

Training Info Training Parameters

showWindow	true	lr	0.5
showCommandLine	false		
show	25		
epochs	1000		
time	Inf		
goal	0		
min_grad	1e-05		
max_fail	6		

Train Network



Hasil Analisis Arsitektur Jaringan Tipe 2

Create Network or Data

Network Data

Name: network1

Network Properties

Network Type: Feed-forward backprop

Input data: Data_Latih4

Target data: Target_Latih4

Training function: TRAINGD

Adaption learning function: LEARNGD

Performance function: MSE

Number of layers: 5

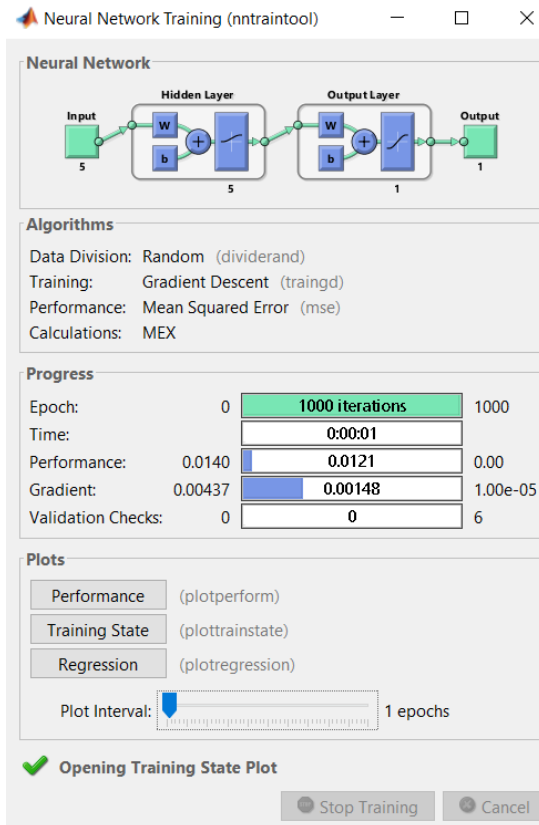
Properties for: Layer 1

Number of neurons: 5

Transfer Function: LOGSIG

View Restore Defaults

Help Create Close



Network: network1

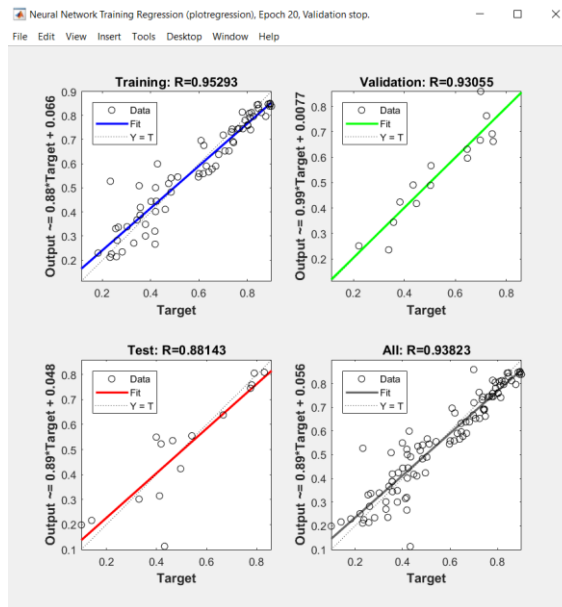
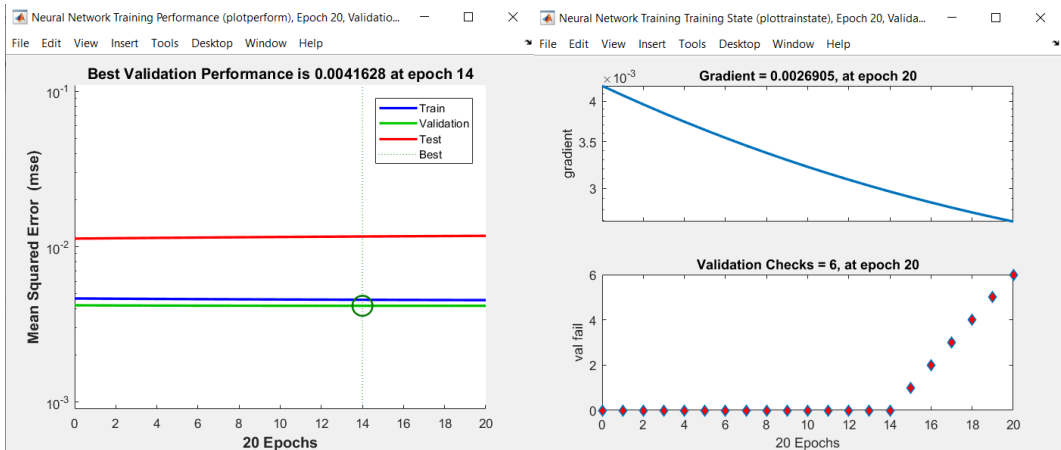


View **Train** Simulate Adapt Reinitialize Weights View/Edit Weights

Training Info Training Parameters

showWindow	true	lr	0.5
showCommandLine	false		
show	25		
epochs	1000		
time	Inf		
goal	0		
min_grad	1e-05		
max_fail	6		

Train Network



Hasil Analisis Arsitektur Jaringan Tipe 3

Create Network or Data

Network Data

Name: network3

Network Properties

Network Type: Feed-forward backprop

Input data: Data_Latih4

Target data: Target_Latih4

Training function: TRAINGD

Adaption learning function: LEARNGD

Performance function: MSE

Number of layers: 5

Properties for: Layer 1

Number of neurons: 10

Transfer Function: LOGSIG

View Restore Defaults

Help Create Close

Neural Network Training (ntraintool)

Neural Network

Algorithms

Data Division: Random (dividerand)

Training: Gradient Descent (traingd)

Performance: Mean Squared Error (mse)

Calculations: MEX

Progress

Epoch:	0	1000 iterations	1000
Time:		0:00:01	
Performance:	0.0639	0.0106	0.00
Gradient:	0.292	0.00335	1.00e-05
Validation Checks:	0	0	6

Plots

Performance (plotperform)

Training State (plottrainstate)

Regression (plotregression)

Plot Interval: 1 epochs

Opening Training State Plot

Stop Training Cancel

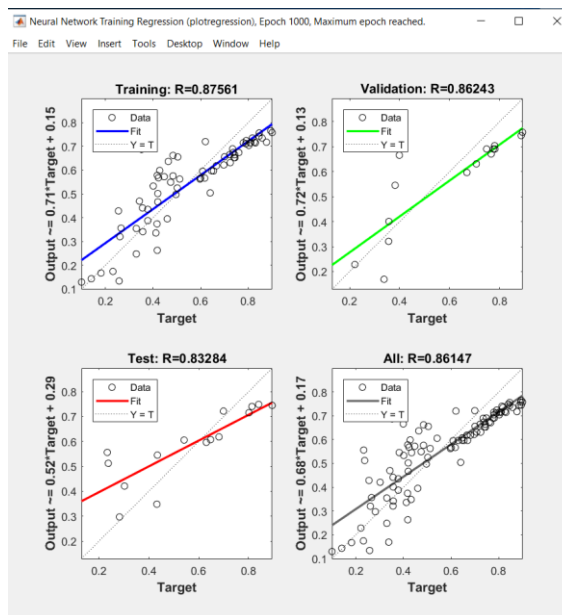
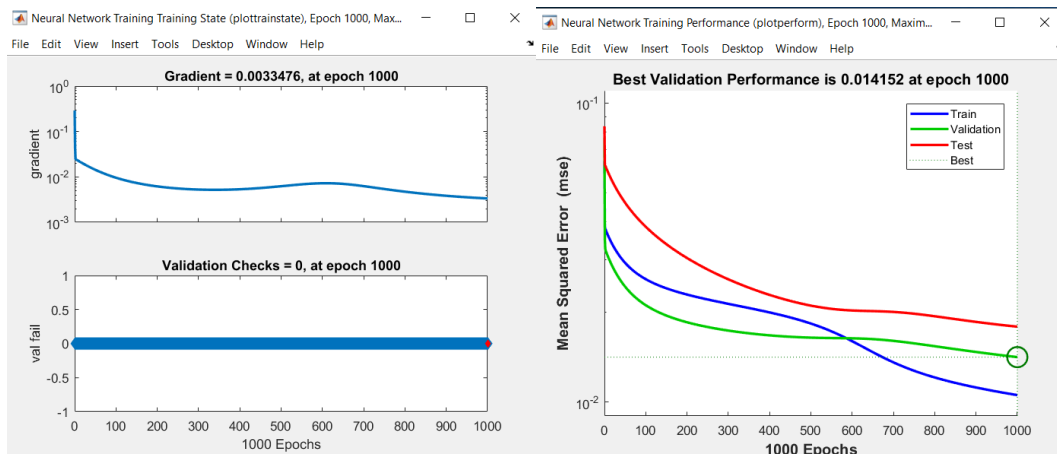
Network: network3

View Train Simulate Adapt Reinitialize Weights View/Edit Weights

Training Info Training Parameters

showWindow	true	lr	0.5
showCommandLine	false		
show	25		
epochs	1000		
time	Inf		
goal	0		
min_grad	1e-05		
max_fail	6		

Train Network



Hasil Analisis Arsitektur Jaringan Tipe 4

Create Network or Data

Network | Data

Name
network4

Network Properties

Network Type: Feed-forward backprop

Input data: Data_Latih4

Target data: Target_Latih4

Training function: TRAINGD

Adaption learning function: LEARNGD

Performance function: MSE

Number of layers: 5

Properties for: Layer 1

Number of neurons: 15

Transfer Function: LOGSIG

View Restore Defaults

Help Create Close

Neural Network Training (ntraintool)

Neural Network

Algorithms

Data Division: Random (dividerand)
 Training: Gradient Descent (traingd)
 Performance: Mean Squared Error (mse)
 Calculations: MEX

Progress

Epoch:	0	1000 iterations	1000
Time:		0:00:01	
Performance:	0.0146	0.0137	0.00
Gradient:	0.00916	0.00108	1.00e-05
Validation Checks:	0	0	6

Plots

Performance (plotperform)
 Training State (plottrainstate)
 Regression (plotregression)

Plot Interval: 1 epochs

Opening Training State Plot

Stop Training Cancel

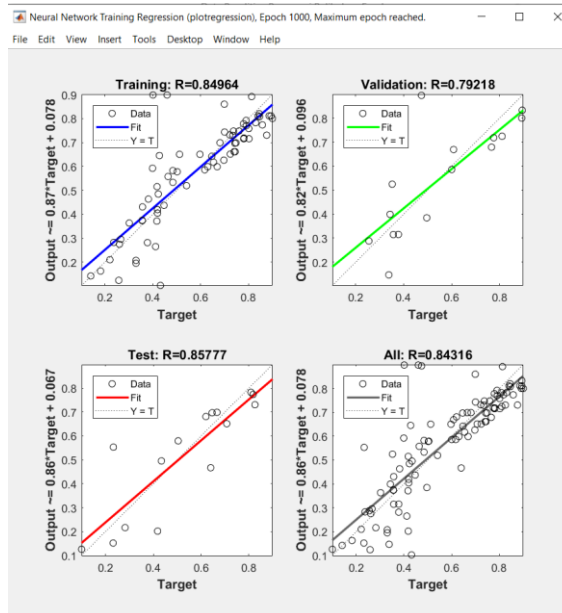
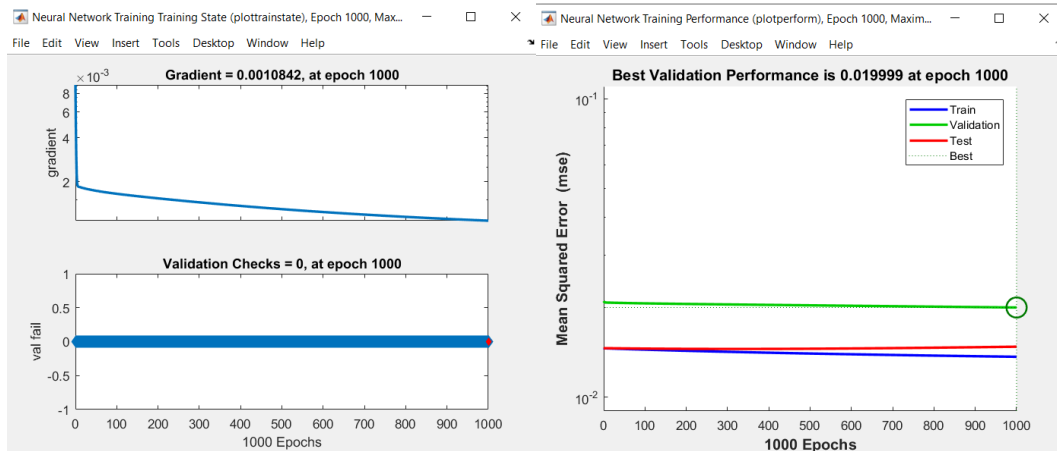
Network: network4

View Train Simulate Adapt Reinitialize Weights View/Edit Weights

Training Info Training Parameters

showWindow	true	lr	0.5
showCommandLine	false		
show	25		
epochs	1000		
time	Inf		
goal	0		
min_grad	1e-05		
max_fail	6		

Train Network



Hasil Analisis Arsitektur Jaringan Tipe 5

Create Network or Data

Network Data

Name
network5

Network Properties

Network Type: Feed-forward backprop

Input data: Data_Latih4

Target data: Target_Latih4

Training function: TRAINGD

Adaption learning function: LEARNGD

Performance function: MSE

Number of layers: 5

Properties for: Layer 1

Number of neurons: 20

Transfer Function: LOGSIG

View Restore Defaults

Help Create Close

Neural Network Training (nntraintool)

Neural Network

Algorithms

Data Division: Random (dividerand)

Training: Gradient Descent (traingd)

Performance: Mean Squared Error (mse)

Calculations: MEX

Progress

Epoch:	0	1000 iterations	1000
Time:		0:00:22	
Performance:	0.0110	0.00838	0.00
Gradient:	0.00336	0.00183	1.00e-05
Validation Checks:	0	0	6

Plots

Performance (plotperform)

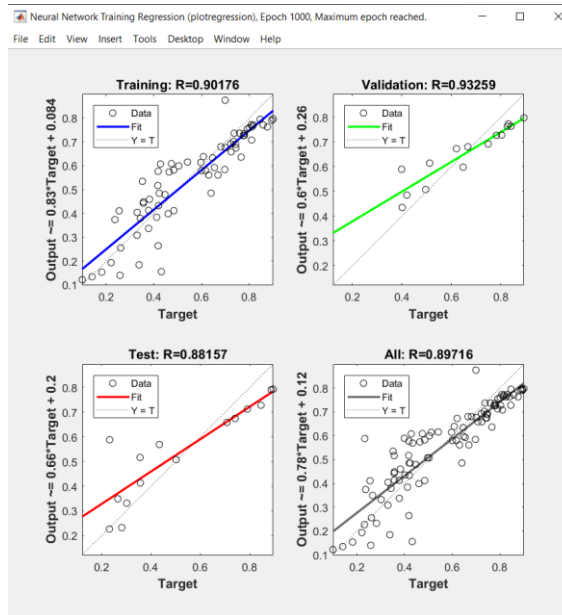
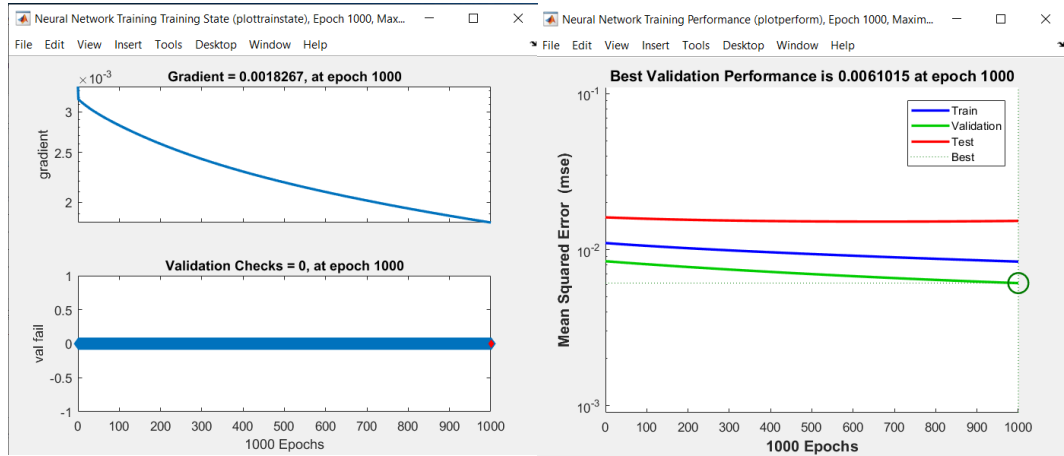
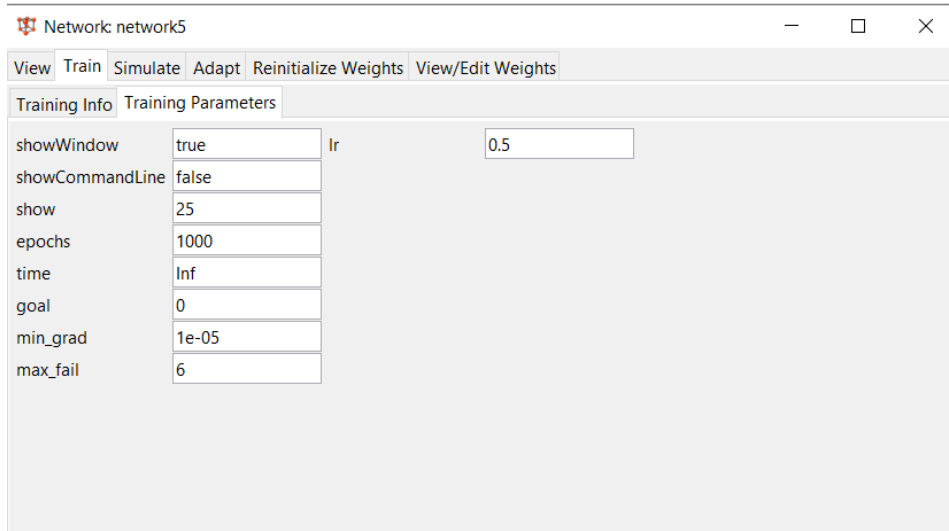
Training State (plottrainstate)

Regression (plotregression)

Plot Interval: 1 epochs

Opening Training State Plot

Stop Training Cancel



Hasil Analisis Arsitektur Jaringan Tipe 6

Create Network or Data

Network Data

Name: network6

Network Properties

Network Type: Feed-forward backprop

Input data: Data_Latih4

Target data: Target_Latih4

Training function: TRAINGD

Adaption learning function: LEARNGD

Performance function: MSE

Number of layers: 5

Properties for: Layer 1

Number of neurons: 25

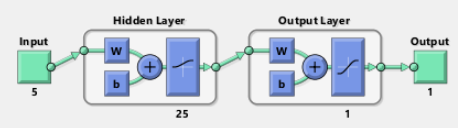
Transfer Function: LOGSIG

View Restore Defaults

Help Create Close

Neural Network Training (ntraintool)

Neural Network



Algorithms

Data Division: Random (dividerand)

Training: Gradient Descent (traingd)

Performance: Mean Squared Error (mse)

Calculations: MEX

Progress

Epoch:	0	1000 iterations	1000
Time:		0:00:01	
Performance:	0.153	0.0104	0.00
Gradient:	0.0999	0.00219	1.00e-05
Validation Checks:	0	0	6

Plots

Performance (plotperform)

Training State (plottrainstate)

Regression (plotregression)

Plot Interval: 1 epochs

Opening Training State Plot

Stop Training Cancel

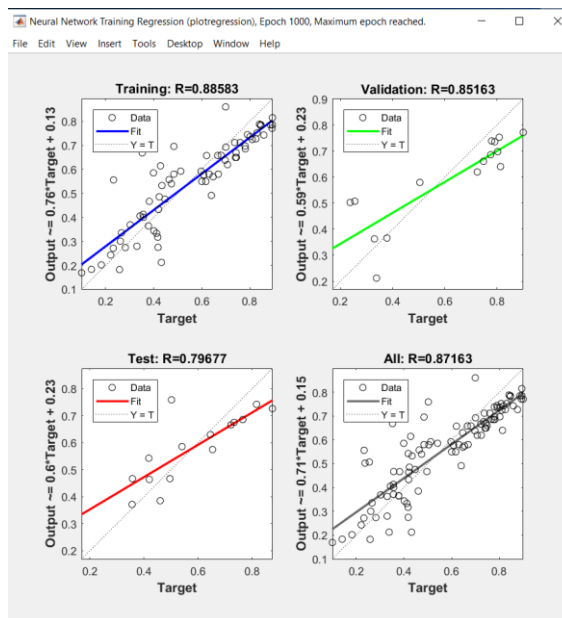
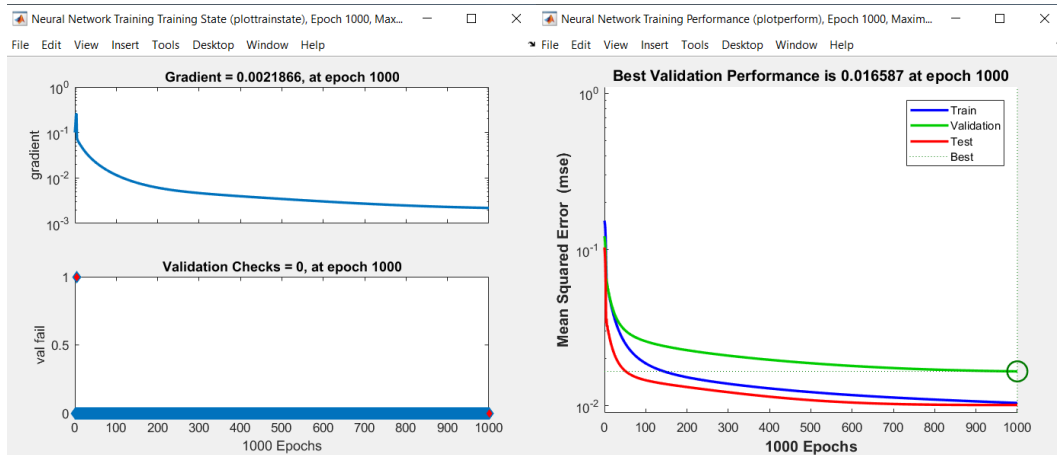
Network: network6

View Train Simulate Adapt Reinitialize Weights View/Edit Weights

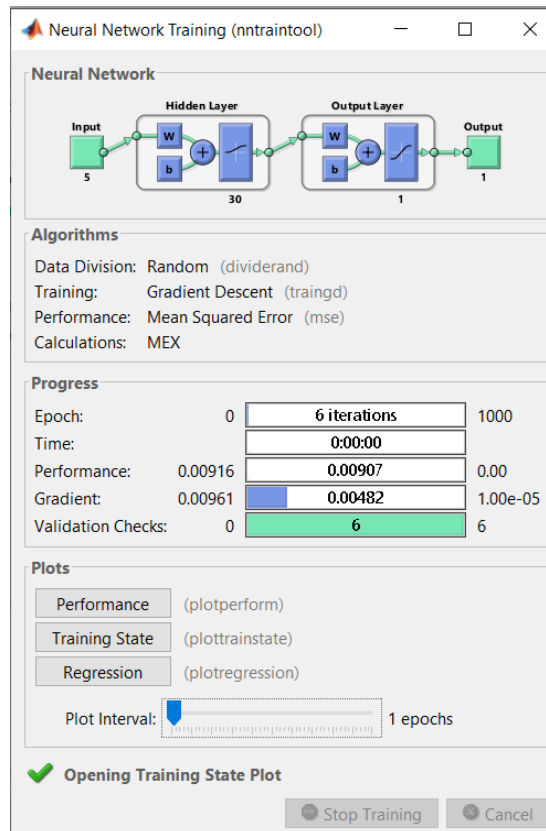
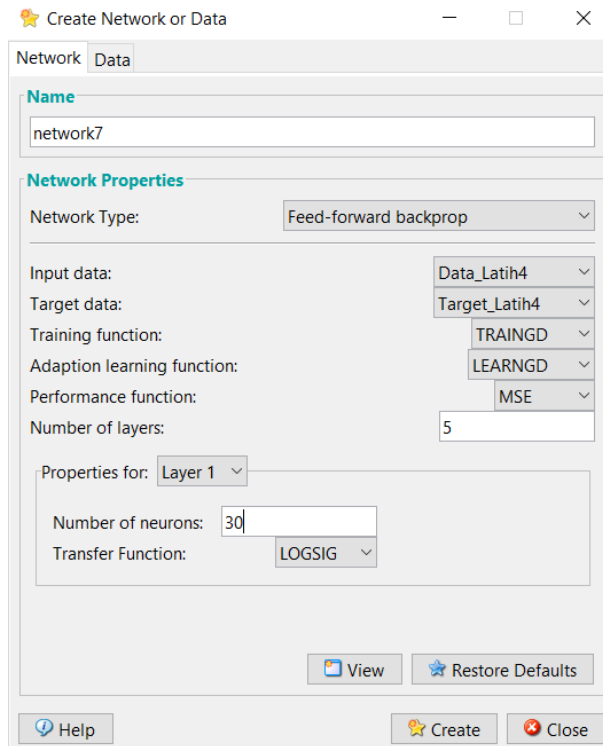
Training Info Training Parameters

showWindow	true	lr	0.5
showCommandLine	false		
show	25		
epochs	1000		
time	Inf		
goal	0		
min_grad	1e-05		
max_fail	6		

Train Network



Hasil Analisis Arsitektur Jaringan Tipe 7



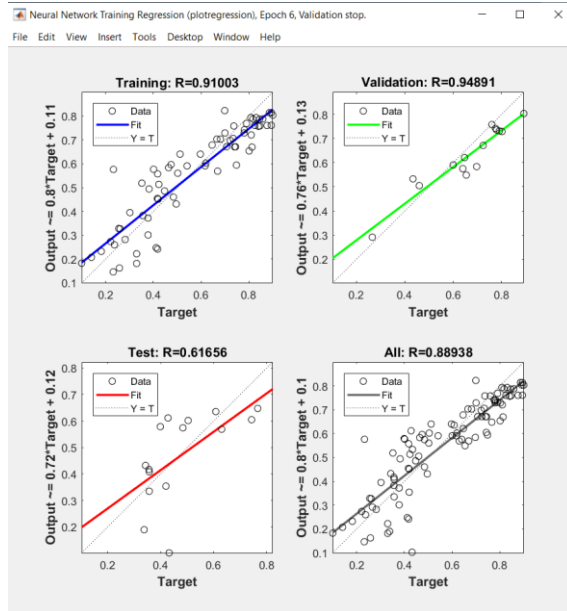
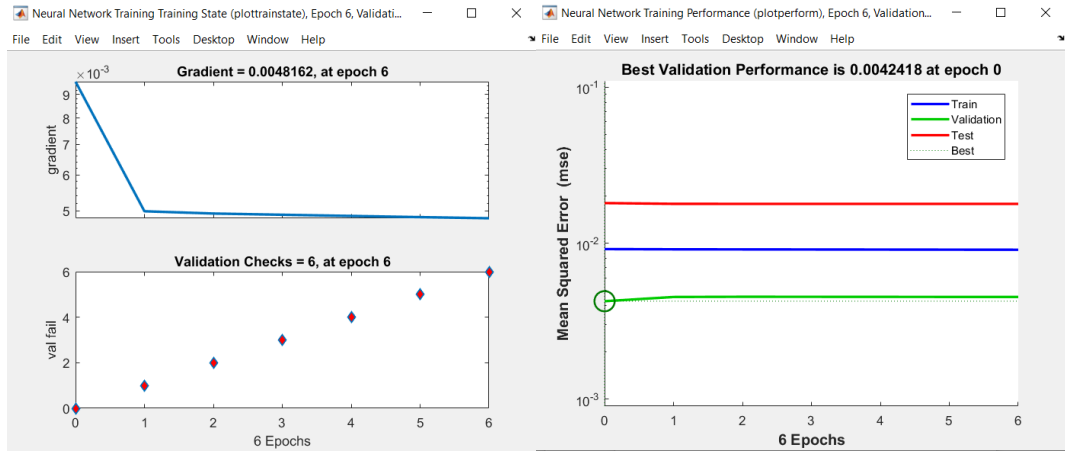
Network: network7

View Train Simulate Adapt Reinitialize Weights View/Edit Weights

Training Info Training Parameters

showWindow	true	lr	0.5
showCommandLine	false		
show	25		
epochs	1000		
time	Inf		
goal	0		
min_grad	1e-05		
max_fail	6		

Train Network



Hasil Analisis Arsitektur Jaringan Tipe 8

Create Network or Data

Network | Data

Name: network8

Network Properties

Network Type: Feed-forward backprop

Input data: Data_Latih4

Target data: Target_Latih4

Training function: TRAINGD

Adaption learning function: LEARNGD

Performance function: MSE

Number of layers: 5

Properties for: Layer 1

Number of neurons: 35

Transfer Function: LOGSIG

View | Restore Defaults

Help | Create | Close

Neural Network Training (ntraintool)

Neural Network

Input: 5

Hidden Layer: 35

Output Layer: 1

Output: 1

Algorithms

Data Division: Random (dividerand)

Training: Gradient Descent (traingd)

Performance: Mean Squared Error (mse)

Calculations: MEX

Progress

Epoch:	0	1000 iterations	1000
Time:		0:00:01	
Performance:	0.0525	0.00636	0.00
Gradient:	0.0775	0.00159	1.00e-05
Validation Checks:	0	0	6

Plots

Performance (plotperform)

Training State (plottrainstate)

Regression (plotregression)

Plot Interval: 1 epochs

Opening Training State Plot

Stop Training | Cancel

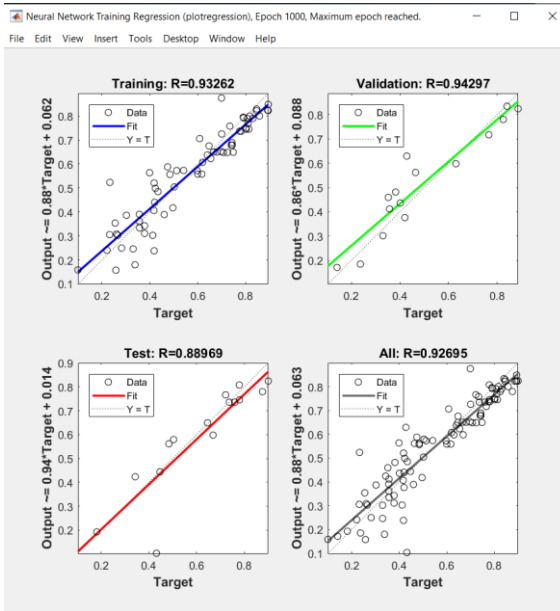
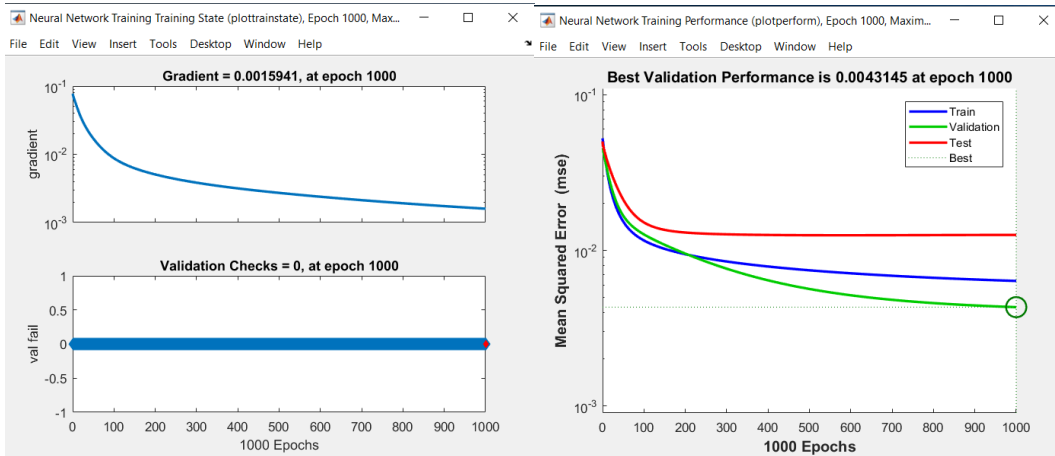
Network: network8

View Train Simulate Adapt Reinitialize Weights View/Edit Weights

Training Info Training Parameters

showWindow	true	lr	0.5
showCommandLine	false		
show	25		
epochs	1000		
time	Inf		
goal	0		
min_grad	1e-05		
max_fail	6		

Train Network



Hasil Analisis Arsitektur Jaringan Tipe 9

Create Network or Data

Network | Data

Name: network9

Network Properties

Network Type: Feed-forward backprop

Input data: Data_Latih4

Target data: Target_Latih4

Training function: TRAINGD

Adaption learning function: LEARNGD

Performance function: MSE

Number of layers: 5

Properties for: Layer 1

Number of neurons: 40

Transfer Function: LOGSIG

View | Restore Defaults

Help | Create | Close

Neural Network Training (ntraintool)

Neural Network

Algorithms

Data Division: Random (dividerand)

Training: Gradient Descent (traingd)

Performance: Mean Squared Error (mse)

Calculations: MEX

Progress

Epoch:	0	130 iterations	1000
Time:		0:00:00	
Performance:	0.0721	0.0126	0.00
Gradient:	0.157	0.101	1.00e-05
Validation Checks:	0	6	6

Plots

Performance (plotperform)

Training State (plottrainstate)

Regression (plotregression)

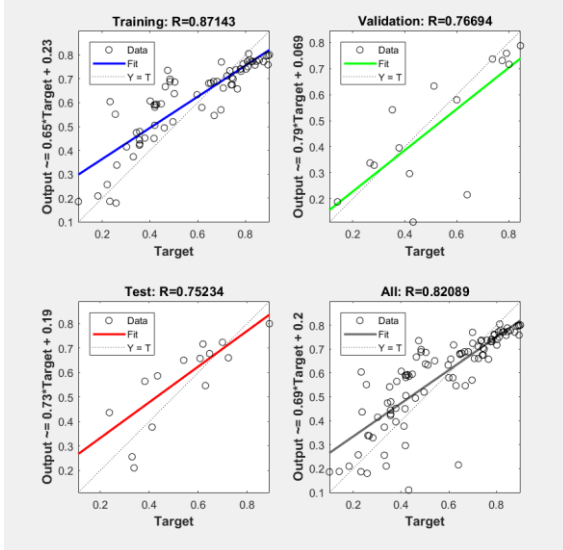
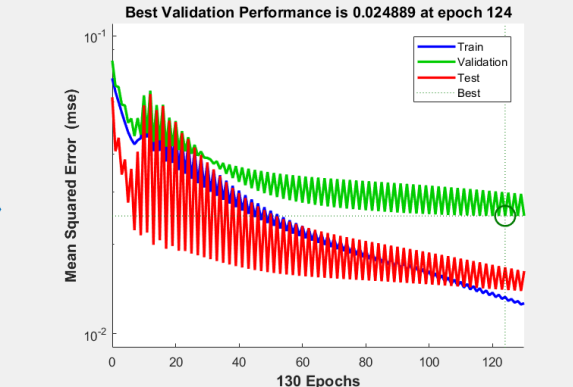
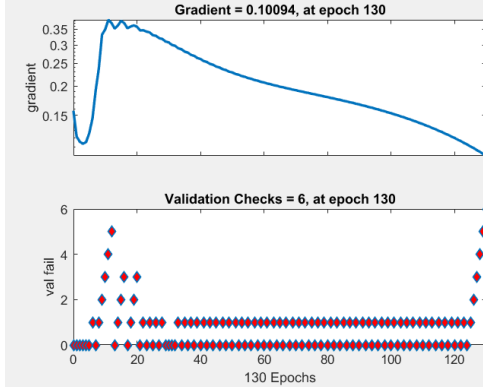
Plot Interval: 1 epochs

Opening Training State Plot

Stop Training | Cancel

showWindow	true	lr	0.5
showCommandLine	false		
show	25		
epochs	1000		
time	Inf		
goal	0		
min_grad	1e-05		
max_fail	6		

Train Network



Hasil Analisis Arsitektur Jaringan Tipe 10

Create Network or Data

Network | Data

Name: network10

Network Properties

Network Type: Feed-forward backprop

Input data: Data_Latih4

Target data: Target_Latih4

Training function: TRAINGD

Adaption learning function: LEARNGD

Performance function: MSE

Number of layers: 5

Properties for: Layer 1

Number of neurons: 45

Transfer Function: LOGSIG

View | Restore Defaults

Help | Create | Close

Neural Network Training (ntraintool)

Neural Network

Algorithms

Data Division: Random (dividerand)

Training: Gradient Descent (traingd)

Performance: Mean Squared Error (mse)

Calculations: MEX

Progress

Epoch:	0	1000 iterations	1000
Time:		0:00:01	
Performance:	0.0221	0.0115	0.00
Gradient:	0.0364	0.00252	1.00e-05
Validation Checks:	0	0	6

Plots

Performance (plotperform)

Training State (plottrainstate)

Regression (plotregression)

Plot Interval: 1 epochs

Opening Performance Plot

Stop Training | Cancel

Network: network10

View Train Simulate Adapt Reinitialize Weights View/Edit Weights

Training Info Training Parameters

showWindow	true	lr	0.5
showCommandLine	false		
show	25		
epochs	1000		
time	Inf		
goal	0		
min_grad	1e-05		
max_fail	6		

Train Network

