

LAMPIRAN A

REKAPITULASI DATA OUTPUT DAN TARGET BP1 DALAM SATUAN METER

TARGET	BP1-3&4	BP1-5	BP1-6	BP1-7	BP1-8	BP1-9	BP1-10
2	97.111	1.5342	1.4863	1.4858	1.4992	1.5965	1.595
2.33	97.111	1.7895	2.2489	1.9202	2.0239	2.0772	1.873
2	97.111	1.755	3.3718	2.2661	2.1227	2.3302	1.9184
2	97.111	1.7431	2.852	1.8312	0.8723	0.65592	4.0521
2	97.111	1.8503	1.5155	2.2541	2.2058	2.5536	2.7529
2	97.111	2.2173	2.0347	2.1738	2.5325	2.3039	1.637
1.8	97.111	1.8419	2.7881	7.1929	2.6948	2.4718	2.6446
1.7	97.111	1.9731	2.2089	1.6973	1.3646	1.2167	2.6786
1.7	97.111	1.5476	1.4274	1.8797	1.7399	2.1156	2.4231
2.8	97.111	1.4851	2.4658	6.1361	1.2908	1.7362	-0.25412
2.23	97.111	2.5284	2.4592	-4.7203	89.722	3.0408	2.702
2.1	97.111	2.3069	3.2377	1.9287	1.5444	-3.6594	2.2573
2.2	97.111	1.3558	3.5843	2.4385	2.3189	2.9974	1.9947
2.33	97.111	2.3851	2.5033	2.4597	2.6794	2.5195	3.1801
2.43	97.111	2.704	2.632	2.2405	2.7198	2.2349	2.667
2.93	97.111	2.5961	2.7894	2.2977	2.5287	2.3856	2.3145
3	97.111	3.255	2.9377	2.9729	2.728	2.2575	4.9232
2.6	97.111	3.1897	3.1448	2.7422	3.1066	2.5762	4.4351
2.5	97.111	1.8266	0.86927	3.6348	-4.722	2.7123	3.8766
2.5	97.111	3.898	1.325	3.2674	-2.1915	-4.7222	1.5332
2.77	97.111	-4.7222	3.1595	2.795	0.8186	3.3775	1.9161
3.73	97.111	7.5404	3.4593	3.6239	2.8843	3.0729	3.4077
3.83	97.111	3.6348	3.0404	3.2285	3.6868	2.7123	2.3436
3.47	97.111	3.5267	3.7856	3.6293	1.9989	-1.8174	4.8593
6.13	97.111	3.6662	3.0328	2.8874	3.1227	3.1147	3.7068
5.5	97.111	3.7653	3.4477	4.6914	-4.7222	3.3127	3.6118
3.87	97.111	3.763	3.1354	4.7099	8.2129	9.2244	1.9145

**REKAPITULASI DATA OUTPUT DAN TARGET BP2 DALAM SATUAN
DESIMETER**

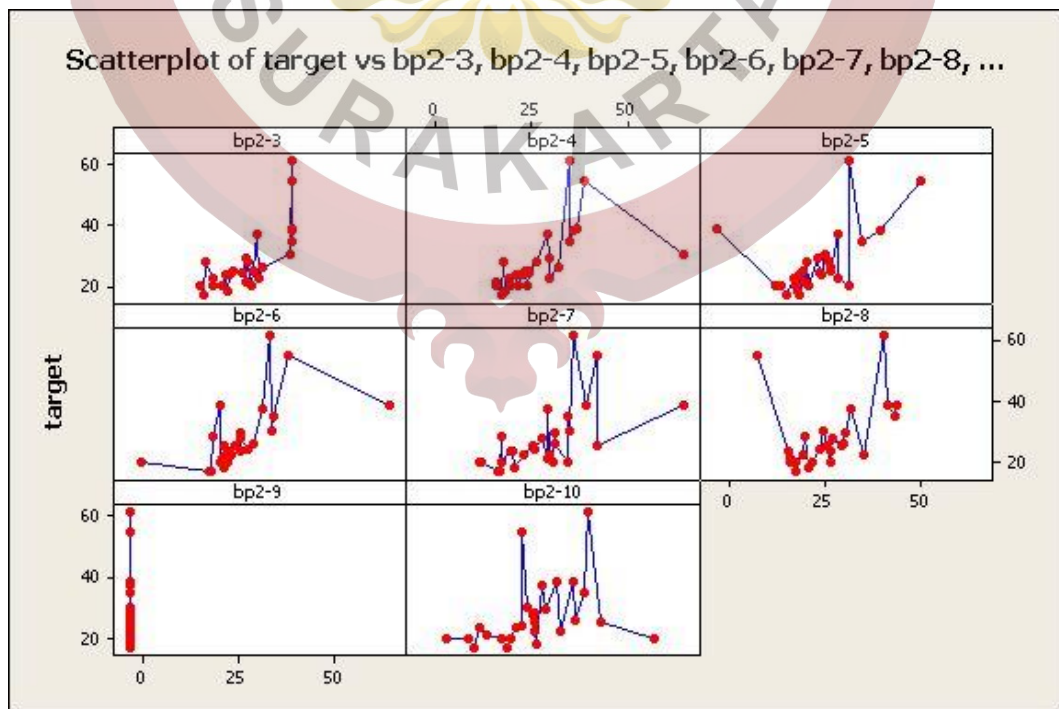
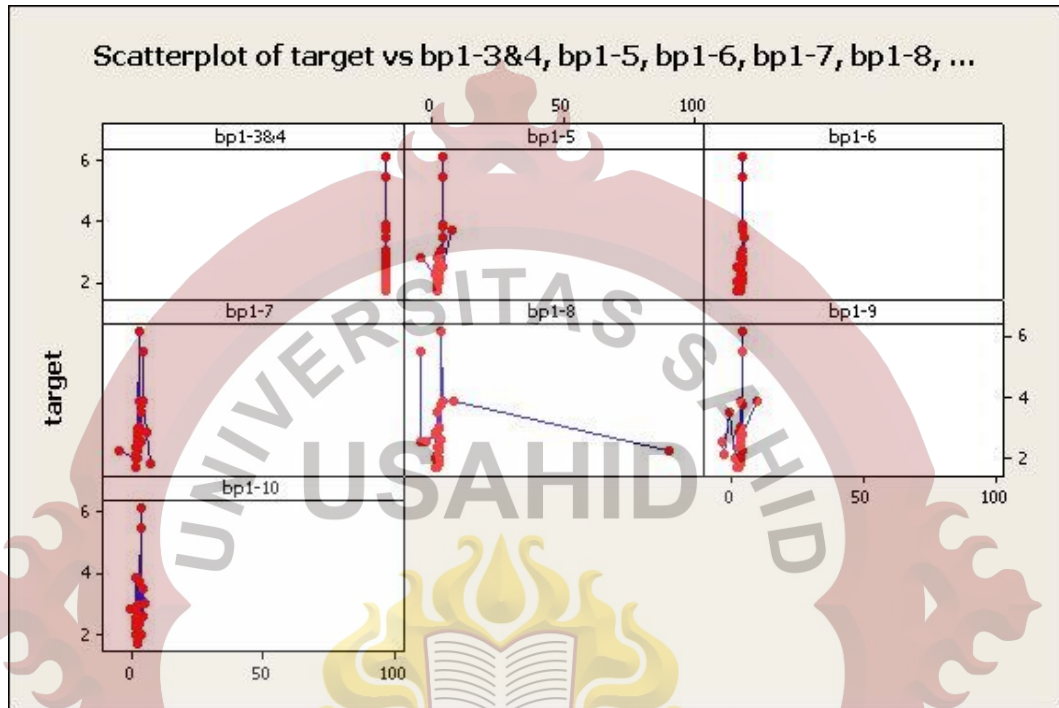
TARGET	BP2-3	BP2-4	BP2-5	BP2-6	BP2-7	BP2-8	BP2-9	BP2-10
20	15.085	15.337	11.598	-0.0988	11.852	15.482	-3.4056	2.5046
23.3	21.707	20.731	17.966	25.519	19.615	15.243	-3.4056	20.952
20	28.633	23.814	31.07	22.289	34.086	26.099	-3.4056	56.843
20	18.467	19.469	13.174	21.982	17.016	17.132	-3.4056	8.1999
20	18.474	21.32	17.158	20.527	30.313	21.236	-3.4056	17.106
20	20.962	21.499	20.357	20.918	11.001	16.342	-3.4056	19.521
18	22.479	17.915	17.564	21.208	20.273	20.733	-3.4056	26.223
17	16.236	17.199	14.739	17.859	16.242	17.127	-3.4056	9.7378
17	16.193	16.89	17.983	17.597	16.63	16.994	-3.4056	18.327
28	16.541	17.339	19.912	18.417	16.769	19.495	-3.4056	25.657
22.3	30.643	29.667	28.402	23.021	29.598	34.886	-3.4056	32.437
21	27.259	15.571	19.787	20.591	28.969	15.715	-3.4056	13.32
22	18.282	18.989	16.809	21.611	22.515	18.962	-3.4056	25.762
23.3	22.819	22.239	23.669	22.84	20.008	26.126	-3.4056	11.142
24.3	26.092	24.121	23.249	27.411	25.768	23.415	-3.4056	22.106
29.3	27.138	29.611	23.025	25.548	30.781	29.97	-3.4056	28.343
30	38.388	64.683	24.737	33.637	34.916	24.378	-3.4056	23.546
26	31.134	31.634	26.159	28.754	31.008	29.504	-3.4056	36.187
25	29.068	23.429	26.464	21.215	41.98	25.548	-3.4056	43.036
25	23.578	24.392	19.246	24.247	25.012	29.09	-3.4056	25.415
27.7	27.673	26.058	26.029	25.724	27.423	26.909	-3.4056	25.143
37.3	30.02	28.851	28.389	31.407	29.115	31.52	-3.4056	27.605
38.3	39.024	35.459	39.353	20.388	39.044	43.872	-3.4056	35.818
34.7	39.06	34.66	34.688	34.186	34.207	43.073	-3.4056	38.558
61.3	38.911	34.554	31.324	33.225	35.797	40.26	-3.4056	39.559
55	39.075	38.586	49.794	38.312	41.799	7.0945	-3.4056	22.392
38.7	39.075	36.828	-3.4056	64.706	64.706	41.045	-3.4056	31.347

**REKAPITULASI DATA OUTPUT DAN TARGET BP3 DALAM SATUAN
DESIMETER**

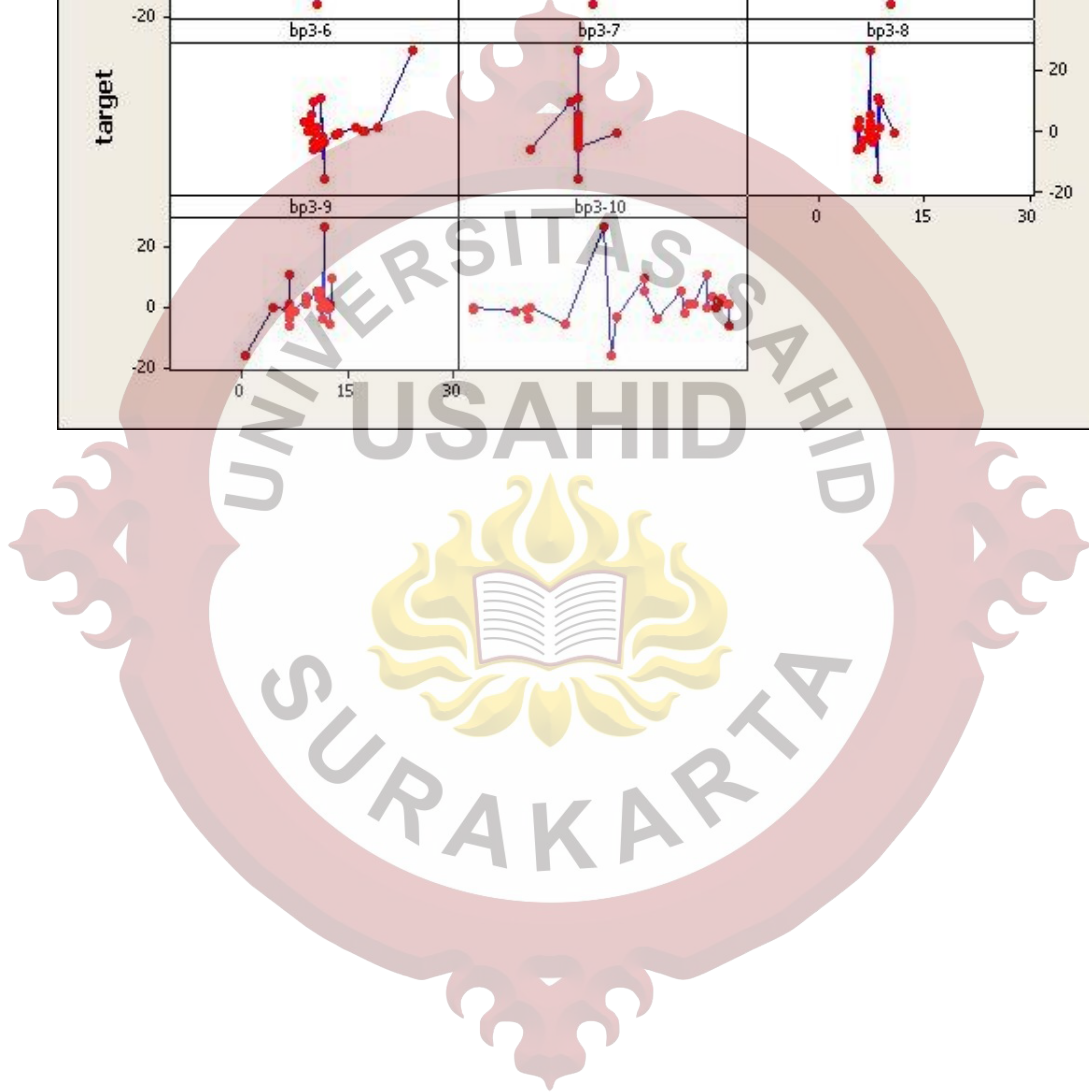
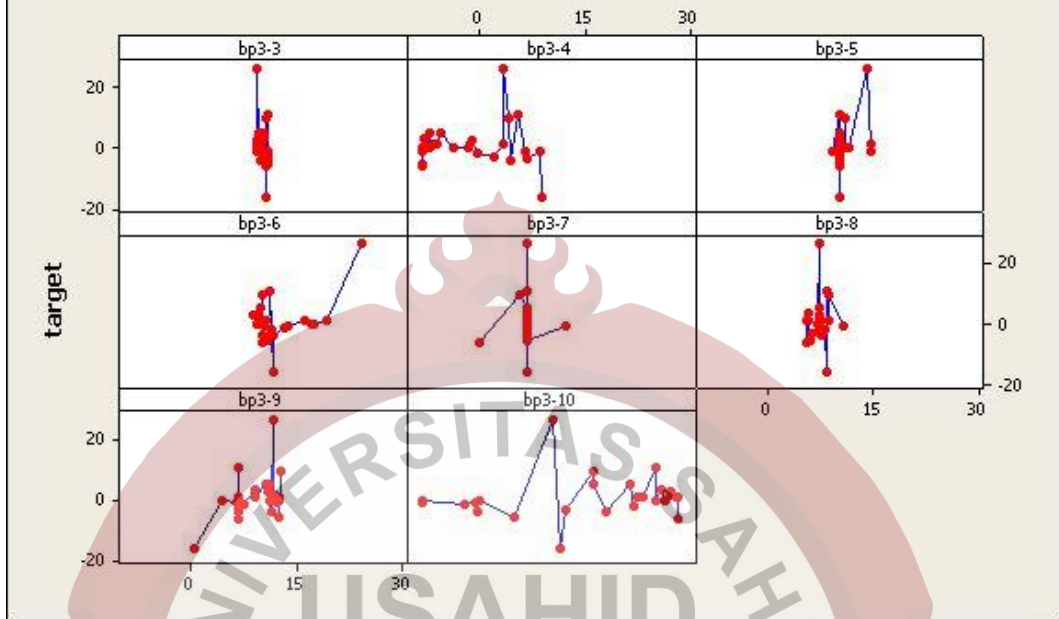
TARGET	BP3-3	BP3-4	BP3-5	BP3-6	BP3-7	BP3-8	BP3-9	BP3-10
4.9996	9.7914	-7.1527	10.143	9.8711	6.7562	7.3177	11.133	21.628
3.3004	10.595	-7.9339	10.128	9.8064	6.7565	5.6379	9.1535	26.106
-3.3004	10.922	2.0789	10.121	11.595	6.7584	6.16	6.8121	12.207
-0.0004	9.5947	-1.5284	11.594	9.4909	6.7562	7.3385	12.612	-0.0161
-0.0004	9.545	-7.1411	10.941	17.29	6.7562	7.0786	12.46	26.627
-0.0004	10.016	-3.8208	10.138	9.4898	6.7562	7.3707	11.206	25.31
-1.9998	10.923	-0.24421	10.123	11.527	6.7613	8.0554	6.9243	21.989
-1	9.8268	-8.1055	10.248	10.444	6.7562	7.3191	12.328	-0.6153
0	9.545	-7.6427	10.624	17.513	6.7562	7.091	12.34	25.284
11	10.926	5.3638	10.114	11.213	6.7624	8.4238	6.7631	25.201
-5.6998	10.923	-8.1278	10.133	10.902	6.8191	5.8803	12.689	4.9434
-1.3003	9.545	6.406	14.579	13.256	6.7562	7.2734	7.5681	-2.0892
0.9999	9.545	3.3437	14.633	16.27	6.7562	8.4955	12.653	27.984
1.3004	9.953	-6.0645	10.133	9.7472	6.7562	7.3272	12.119	27.35
0.9996	10.039	-6.5557	10.13	10.776	6.7565	7.3952	9.2822	22.502
5.0004	10.46	-5.5487	10.132	9.9786	6.7562	7.42	10.661	16.355
0.7003	9.6488	-8.0228	10.161	9.6934	6.7562	5.4438	11.892	23.443
-4.0004	10.073	4.2967	10.131	11.897	6.7565	7.5436	6.8373	18.04
-0.9996	10.898	8.4962	9.0859	13.976	12.326	10.721	6.6074	-8.1278
0.0004	9.6623	-8.1278	10.493	10.199	6.7562	7.2815	4.4009	-8.1275
2.6996	9.545	-1.2276	10.309	8.7722	6.7715	7.3652	11.055	27.417
9.5999	10.639	4.1852	10.872	10.202	5.7052	8.6571	12.836	16.284
1.0001	9.6733	-1.4363	10.127	19.343	6.7767	5.7081	6.6695	28.243
-3.6002	10.885	6.913	10.264	10.116	6.7562	7.5111	11.53	-0.3557
26.604	9.545	3.4274	14.279	24.339	6.7562	7.1879	11.867	10.403
-6.2956	10.787	-8.1278	10.122	10.25	-0.1144	5.5202	6.8816	28.428
-16.3	10.769	8.9108	10.144	11.655	6.7562	8.3632	0.3732	11.544

LAMPIRAN B

PLOT DATA TARGET DAN OUTPUT JARINGAN



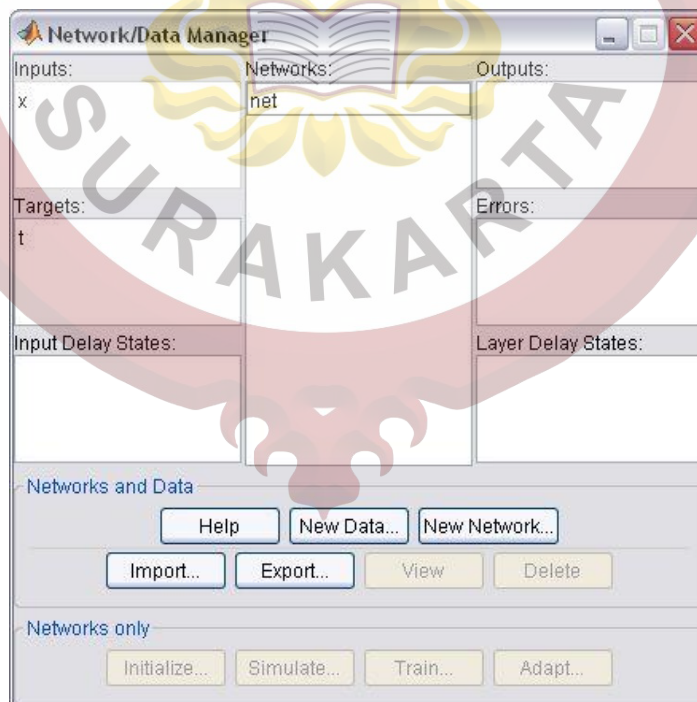
Scatterplot of target vs bp3-3, bp3-4, bp3-5, bp3-6, bp3-7, bp3-8, ...



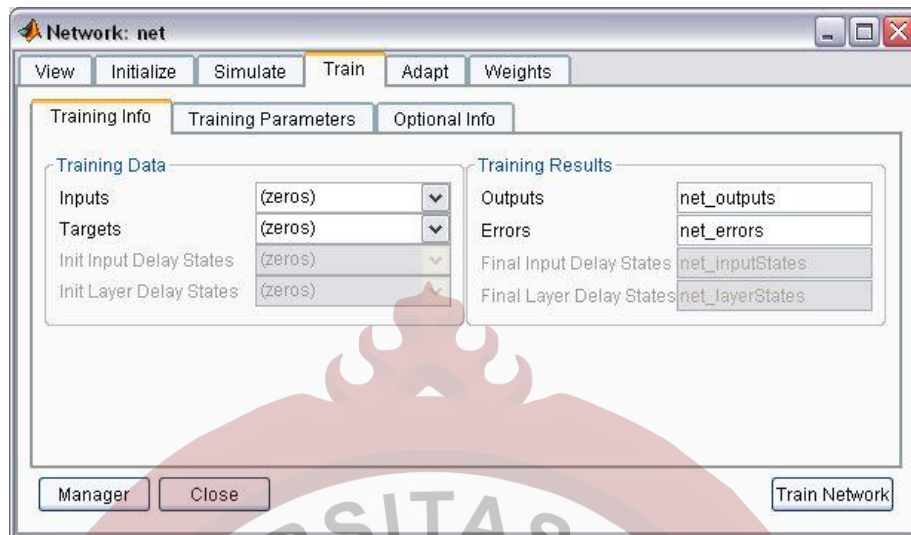
LAMPIRAN C

LISTING PROGRAM BACKPROPAGATION DENGAN MATLAB

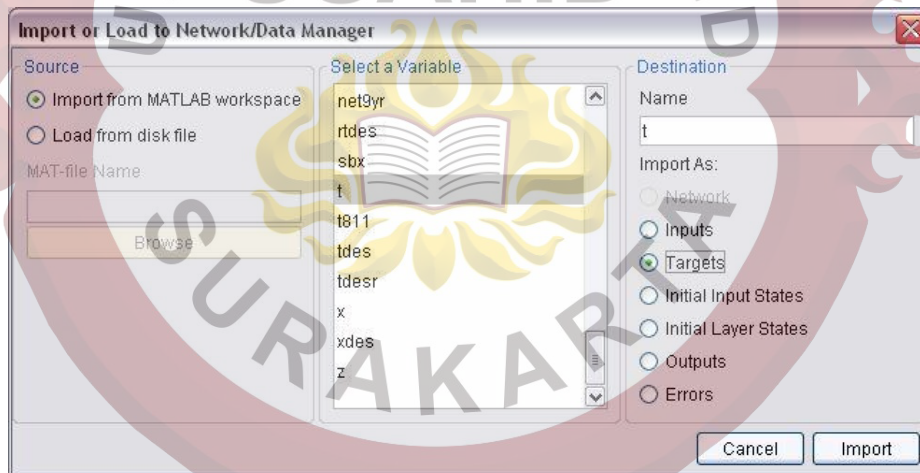
```
>> net = newff (minmax(x), [3,1], {'tansig','purelin'},  
'trainlm');  
Newff perintah untuk membentuk jaringan backpropagation baru  
minmax(x) untuk menghitung nilai minimum dan maksimum matriks  
input x  
[3, 1] jumlah neuron pada hidden dan output layer  
{'tansig','purelin'} mendefinisikan fungsi aktivasi pada hidden  
dan output layer  
'trainlm' mendefinisikan algoritma pelatihan  
>> net.trainParam.lr = 0.1; %menentukan besar learning rate  
>> net.trainParam.epochs = 1000; %menentukan banyak epoch  
>> net = train (net, x, t) %fungsi untuk melatih jaringan  
>> nntool %memunculkan jendela network/data manager
```



Jendela *Network/Data Manager*



Jendela parameter jaringan



Jendela *import* jaringan dan data