

Using Hybrid Artificial Intelligence and Evolutionary Optimization Algorithms for Estimating Soybean Yield and Fresh Biomass Using Hyperspectral Vegetation Indices

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Table S1. Tabular format of Pearson correlation analysis of hyperspectral vegetation indices (HVI), soybean seed yield, and fresh biomass (FBIO).

Vraiables	FBIO	Yield	S19	S18	S17	S16	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	RDVI	GNDVI	NDRE	N12	N11	N10	N9	N8	N7	N6	N5	N4	N3	N2	N1
FBIO	1	0.94	-0.73	-0.73	-0.73	-0.75	-0.73	0.74	-0.75	-0.79	-0.84	-0.88	0.75	-0.89	-0.75	-0.89	-0.86	-0.89	-0.85	-0.82	0.62	-0.9	-0.8	-0.84	-0.73	-0.84	-0.75	-0.77	-0.82	-0.74	-0.77	-0.9	-0.89	-0.84	-0.72	-0.18
Yield	0.94	1	-0.71	-0.71	-0.71	-0.73	-0.71	0.71	-0.73	-0.76	-0.8	-0.84	0.69	-0.84	-0.7	-0.84	-0.82	-0.84	-0.81	-0.78	0.6	-0.84	-0.76	-0.79	-0.7	-0.79	-0.72	-0.73	-0.77	-0.71	-0.73	-0.84	-0.83	-0.79	-0.66	-0.15
S19	-0.73	-0.71	1	1	1	1	1	-0.99	1	0.98	0.94	0.84	-0.38	0.8	0.4	0.8	0.81	0.8	0.92	0.94	-0.83	0.83	0.95	0.98	1	0.97	0.99	0.98	0.98	1	0.98	0.83	0.81	0.94	0.43	-0.29
S18	-0.73	-0.71	1	1	1	1	1	-1	1	0.99	0.94	0.85	-0.39	0.8	0.41	0.8	0.82	0.8	0.93	0.94	-0.83	0.84	0.95	0.97	0.99	0.97	1	0.99	0.99	1	0.99	0.84	0.82	0.95	0.44	-0.3
S17	-0.73	-0.71	1	1	1	1	1	-0.99	1	0.98	0.94	0.84	-0.38	0.8	0.4	0.8	0.81	0.8	0.92	0.94	-0.83	0.83	0.95	0.98	1	0.97	0.99	0.98	0.98	1	0.98	0.83	0.81	0.94	0.43	-0.29
S16	-0.75	-0.73	1	1	1	1	1	-0.99	1	0.99	0.96	0.87	-0.42	0.83	0.44	0.83	0.84	0.83	0.94	0.95	-0.83	0.85	0.96	0.98	0.99	0.98	1	0.99	0.99	1	0.99	0.85	0.84	0.96	0.46	-0.27
S15	-0.73	-0.71	1	1	1	1	1	-0.99	1	0.98	0.94	0.84	-0.39	0.8	0.41	0.8	0.81	0.8	0.92	0.94	-0.82	0.83	0.95	0.98	1	0.97	0.99	0.98	0.98	0.99	0.98	0.83	0.81	0.94	0.43	-0.29
S14	0.74	0.71	-0.99	-1.00	-0.99	-0.99	-0.99	1.00	-0.99	-0.98	-0.94	-0.85	0.39	-0.80	-0.41	-0.80	-0.82	-0.80	-0.93	-0.94	0.85	-0.84	-0.96	-0.98	-0.99	-0.97	-1.00	-0.99	-0.99	-1.00	-0.99	-0.84	-0.83	-0.95	-0.45	0.32
S13	-0.75	-0.73	1.00	1.00	1.00	1.00	1.00	-0.99	1.00	0.99	0.96	0.87	-0.42	0.83	0.44	0.83	0.84	0.83	0.94	0.95	-0.83	0.85	0.96	0.98	0.99	0.98	1.00	0.99	0.99	1.00	0.99	0.85	0.84	0.96	0.46	-0.27
S12	-0.79	-0.76	0.98	0.99	0.98	0.99	0.98	-0.98	0.99	1.00	0.98	0.91	-0.50	0.88	0.52	0.88	0.89	0.88	0.97	0.98	-0.84	0.90	0.98	0.98	0.97	0.98	0.99	0.99	0.99	0.99	0.99	0.90	0.89	0.97	0.53	-0.22
S11	-0.84	-0.80	0.94	0.94	0.94	0.96	0.94	-0.94	0.96	0.98	1.00	0.97	-0.65	0.94	0.66	0.94	0.96	0.94	0.99	0.99	-0.81	0.95	0.98	0.96	0.92	0.96	0.96	0.97	0.97	0.95	0.97	0.95	0.95	0.98	0.64	-0.08
S10	-0.88	-0.84	0.84	0.85	0.84	0.87	0.84	-0.85	0.87	0.91	0.97	1.00	-0.81	1.00	0.82	0.99	0.99	0.99	0.97	0.95	-0.72	0.99	0.93	0.91	0.83	0.91	0.87	0.89	0.91	0.86	0.89	0.99	0.99	0.94	0.76	0.14
S9	0.75	0.69	-0.38	-0.39	-0.38	-0.42	-0.39	0.39	-0.42	-0.50	-0.65	-0.81	1.00	-0.85	-1.00	-0.85	-0.82	-0.85	-0.67	-0.62	0.33	-0.82	-0.57	-0.54	-0.37	-0.54	-0.42	-0.46	-0.51	-0.41	-0.46	-0.82	-0.84	-0.61	-0.85	-0.62
S8	-0.89	-0.84	0.80	0.80	0.80	0.83	0.80	-0.80	0.83	0.88	0.94	1.00	-0.85	1.00	0.87	1.00	0.99	1.00	0.95	0.93	-0.68	0.99	0.90	0.89	0.79	0.88	0.82	0.85	0.87	0.81	0.85	0.99	0.99	0.92	0.78	0.22
S7	-0.75	-0.70	0.40	0.41	0.40	0.44	0.41	-0.41	0.44	0.52	0.66	0.82	-1.00	0.87	1.00	0.86	0.83	0.86	0.68	0.64	-0.36	0.83	0.59	0.55	0.39	0.55	0.44	0.48	0.52	0.42	0.48	0.83	0.84	0.63	0.85	0.60
S6	-0.89	-0.84	0.80	0.80	0.80	0.83	0.80	-0.80	0.83	0.88	0.94	0.99	-0.85	1.00	0.86	1.00	0.99	1.00	0.95	0.93	-0.69	0.98	0.90	0.89	0.79	0.89	0.82	0.85	0.87	0.81	0.85	0.98	0.99	0.92	0.77	0.22
S5	-0.86	-0.82	0.81	0.82	0.81	0.84	0.81	-0.82	0.84	0.89	0.96	0.99	-0.82	0.99	0.83	0.99	1.00	0.99	0.96	0.95	-0.74	0.98	0.93	0.88	0.80	0.89	0.84	0.87	0.88	0.83	0.87	0.98	0.99	0.94	0.72	0.14
S4	-0.89	-0.84	0.80	0.80	0.80	0.83	0.80	-0.80	0.83	0.88	0.94	0.99	-0.85	1.00	0.86	1.00	0.99	1.00	0.95	0.93	-0.69	0.98	0.90	0.89	0.79	0.89	0.82	0.85	0.87	0.81	0.85	0.98	0.99	0.92	0.77	0.22
S3	-0.85	-0.81	0.92	0.93	0.92	0.94	0.92	-0.93	0.94	0.97	0.99	0.97	-0.67	0.95	0.68	0.95	0.96	0.95	1.00	1.00	-0.77	0.96	0.98	0.96	0.91	0.97	0.94	0.95	0.96	0.93	0.95	0.96	0.95	0.99	0.59	-0.02
S2	-0.82	-0.78	0.94	0.94	0.94	0.95	0.94	-0.94	0.95	0.98	0.99	0.95	-0.62	0.93	0.64	0.93	0.95	0.93	1.00	1.00	-0.80	0.94	0.99	0.96	0.93	0.97	0.95	0.96	0.96	0.95	0.96	0.94	0.93	0.99	0.55	-0.09
S1	0.62	0.60	-0.83	-0.83	-0.83	-0.83	-0.82	0.85	-0.83	-0.84	-0.81	-0.72	0.33	-0.68	-0.36	-0.69	-0.74	-0.69	-0.77	-0.80	1.00	-0.72	-0.83	-0.81	-0.83	-0.80	-0.85	-0.86	-0.83	-0.85	-0.86	-0.72	-0.73	-0.82	-0.46	0.41
RDVI	-0.90	-0.84	0.83	0.84	0.83	0.85	0.83	-0.84	0.85	0.90	0.95	0.99	-0.82	0.99	0.83	0.98	0.98	0.98	0.96	0.94	-0.72	1.00	0.93	0.92	0.82	0.91	0.86	0.88	0.91	0.85	0.88	1.00	1.00	0.95	0.76	0.15
GNDVI	-0.80	-0.76	0.95	0.95	0.95	0.96	0.95	-0.96	0.96	0.98	0.98	0.93	-0.57	0.90	0.59	0.90	0.93	0.90	0.98	0.99	-0.83	0.93	1.00	0.97	0.94	0.97	0.97	0.98	0.98	0.97	0.98	0.93	0.92	1.00	0.52	-0.16
NDRE	-0.84	-0.79	0.98	0.97	0.98	0.98	0.98	-0.98	0.98	0.98	0.96	0.91	-0.54	0.89	0.55	0.89	0.88	0.89	0.96	0.96	-0.81	0.92	0.97	1.00	0.97	1.00	0.98	0.98	1.00	0.98	0.98	0.92	0.90	0.98	0.54	-0.14
N12	-0.73	-0.70	1.00	0.99	1.00	0.99	1.00	-0.99	0.99	0.97	0.92	0.83	-0.37	0.79	0.39	0.79	0.80	0.79	0.91	0.93	-0.83	0.82	0.94	0.97	1.00	0.97	0.98	0.98	0.98	0.99	0.98	0.82	0.80	0.93	0.42	-0.30
N11	-0.84	-0.79	0.97	0.97	0.97	0.98	0.97	-0.97	0.98	0.98	0.96	0.91	-0.54	0.88	0.55	0.89	0.89	0.89	0.97	0.97	-0.80	0.91	0.97	1.00	0.97	1.00	0.97	0.97	0.99	0.97	0.97	0.91	0.90	0.98	0.52	-0.12
N10	-0.75	-0.72	0.99	1.00	0.99	1.00	0.99	-1.00	1.00	0.99	0.96	0.87	-0.42	0.82	0.44	0.82	0.84	0.82	0.94	0.95	-0.85	0.86	0.97	0.98	0.98	0.97	1.00	1.00	0.99	1.00	1.00	0.86	0.84	0.96	0.47	-0.30
N9	-0.77	-0.73	0.98	0.99	0.98	0.99	0.98	-0.99	0.99	0.99	0.97	0.89	-0.46	0.85	0.48	0.85	0.87	0.85	0.95	0.96	-0.86	0.88	0.98	0.98	0.98	0.97	1.00	1.00	0.99	1.00	1.00	0.88	0.87	0.97	0.51	-0.27
N8	-0.82	-0.77	0.98	0.99	0.98	0.99	0.98	-0.99	0.99	0.99	0.97	0.91	-0.51	0.87	0.52	0.87	0.88	0.87	0.96	0.96	-0.83	0.91	0.98	1.00	0.98	0.99	0.99	0.99	1.00	0.99	0.99	0.91	0.89	0.98	0.53	-0.20
N7	-0.74	-0.71	1.00	1.00	1.00	1.00	0.99	-1.00	1.00	0.99	0.95	0.86	-0.41	0.81	0.42	0.81	0.83	0.81	0.93	0.95	-0.85	0.85	0.97	0.98	0.99	0.97	1.00	1.00	0.99	1.00	1.00	0.85	0.83	0.96	0.46	-0.30
N6	-0.77	-0.73	0.98	0.99	0.98	0.99	0.98	-0.99	0.99	0.99	0.97	0.89	-0.46	0.85	0.48	0.85	0.87	0.85	0.95	0.96	-0.86	0.88	0.98	0.98	0.98	0.97	1.00	1.00	0.99	1.00	1.00	0.88	0.87	0.97	0.51	-0.27
N5	-0.90	-0.84	0.83	0.84	0.83	0.85	0.83	-0.84	0.85	0.90	0.95	0.99	-0.82	0.99	0.83	0.98	0.98	0.98	0.96	0.94	-0.72	1.00	0.93	0.92	0.82	0.91	0.86	0.88	0.91	0.85	0.88	1.00	1.00	0.95	0.76	0.15
N4	-0.89	-0.83	0.81	0.82	0.81	0.84	0.81	-0.83	0.84	0.89	0.95	0.99	-0.84	0.99	0.84	0.99	0.99	0.99	0.95	0.93	-0.73	1.00	0.92	0.90	0.80	0.90	0.84	0.87	0.89	0.83	0.87	1.00	1.00	0.94	0.77	0.17
N3	-0.84	-0.79	0.94	0.95	0.94	0.96	0.94	-0.95	0.96	0.97	0.98	0.94	-0.61	0.92	0.63	0.92	0.94	0.92	0.99	0.99	-0.82	0.95	1.00	0.98	0.93	0.98	0.96	0.97	0.98	0.96	0.97	0.95	0.94	1.00	0.56	-0.11
N2	-0.72	-0.66	0.43	0.44	0.43	0.46	0.43	-0.45	0.46	0.53	0.64	0.76	-0.85	0.78	0.85	0.77	0.72	0.77	0.59	0.55	-0.46	0.76	0.52	0.54	0.42	0.52	0.47	0.51	0.53	0.46	0.51	0.76	0.77	0.56	1.00	0.37
N1	-0.18	-0.15	-0.29	-0.30	-0.29	-0.27	-0.29	0.32	-0.27	-0.22	-0.08	0.14	-0.62	0.22	0.60	0.22	0.14	0.22	-0.02	-0.09	0.41	0.15	-0.16	-0.14	-0.30	-0.12	-0.30	-0.27	-0.20	-0.30	-0.27	0.15	0.17	-0.11	0.37	1.00

Table S2. Analysis performance of random forest (RF), radial basis function (RBF), and support vector regression (SVR) algorithms for soybean yield prediction using yield component traits.

Algorithm	MAE (Kg.ha ⁻¹)	RMSE (Kg.ha ⁻¹)	Coefficient of determination (R ²)
RF	194.4164392	264.3694044	0.851041562
RF	153.6659487	225.8010471	0.868714008
RF	196.0085792	255.6093528	0.825276419
RF	128.2046264	162.9308531	0.898963613
RF	190.9728488	292.831912	0.771887352
RF	161.2443396	206.7116935	0.880600038
RF	237.3928162	378.5903199	0.786487711
RF	174.5036521	230.900251	0.870352877
RF	167.7280337	228.6508868	0.821401288
RF	156.1771348	219.7076022	0.8658249
RF	152.5430389	228.1215753	0.852017326
RF	195.607481	266.2181885	0.821569354
RF	196.9190055	324.9220828	0.81987753
RF	199.3637476	255.9968455	0.820151912
RF	176.6348179	249.9933007	0.807212658
RF	164.6068529	233.8554832	0.841945295
RF	197.7039414	253.489436	0.801026804
RF	176.9438476	297.3525796	0.795019998
RF	162.9480293	262.3442671	0.860342859
RF	149.6396158	189.241463	0.884526328
RF	165.5872226	210.4387478	0.841994732
RF	214.2586298	331.5895186	0.777967825
RF	140.8431341	193.2645868	0.917992395
RF	177.3601749	246.9138108	0.833648229
RF	187.8457237	258.4256551	0.820404094
RF	173.4347837	225.0137528	0.885411206
RF	172.26188	246.0583511	0.853459052
RF	137.8932001	181.087718	0.865382502
RF	144.5719989	216.6240212	0.878340108
RF	230.0856937	345.8972946	0.767554612
RF	203.8437002	288.4935979	0.820017696
RF	159.8103711	204.2963386	0.882240097
RF	147.2445154	208.7225649	0.868152667
RF	190.816143	316.930276	0.801753073
RF	159.0294133	199.275656	0.851906349
RF	187.0878757	254.7363732	0.791581404
RF	169.7205721	236.6627781	0.80833428
RF	150.2662134	186.5224665	0.889374882
RF	169.5110898	234.2206669	0.871887243
RF	211.0291434	321.450775	0.795012935

RF	147.178802	208.1800056	0.846933853
RF	160.1442493	213.4685974	0.881260499
RF	158.9773195	216.8433078	0.88888212
RF	176.2874827	254.0229866	0.798749809
RF	212.6379021	309.14105	0.816370719
RF	191.7389196	258.0168978	0.84423525
RF	185.521718	298.2415012	0.769271068
RF	163.5115468	237.5566316	0.827595832
RF	149.2701387	195.7500659	0.869894049
RF	159.155492	230.8599248	0.878819171
RBF	166.482403	228.1225591	0.895936303
RBF	141.8539799	209.7292324	0.88755794
RBF	177.4770866	244.498738	0.82952697
RBF	124.4508702	159.3585312	0.89595357
RBF	171.7851253	284.0133451	0.786188535
RBF	151.7472256	199.2448359	0.889020262
RBF	191.3819275	332.3332549	0.843649759
RBF	156.3124725	217.4039771	0.875875273
RBF	151.2263493	194.6464191	0.870931493
RBF	161.1456794	250.2351497	0.819443301
RBF	140.899325	199.494637	0.891653504
RBF	166.5171916	237.9066547	0.861616795
RBF	174.9630045	298.9875977	0.865127154
RBF	161.806343	204.3550293	0.894761192
RBF	179.6671577	265.7072244	0.773685629
RBF	134.2890418	185.6078136	0.898262776
RBF	168.361031	213.8865503	0.855724035
RBF	158.4137791	264.0797234	0.841063207
RBF	184.1080335	319.0615869	0.781863737
RBF	138.1787432	172.1319603	0.906035473
RBF	152.0514538	193.1760534	0.867119796
RBF	194.512439	322.1013565	0.794374653
RBF	120.8858254	177.1896796	0.939188454
RBF	162.7073572	219.3045294	0.867315056
RBF	148.6239503	193.105992	0.899124255
RBF	173.313671	258.5462006	0.846279147
RBF	158.3618457	216.1436186	0.863422465
RBF	127.727618	171.1289184	0.880682997
RBF	138.5087609	204.2425557	0.892393716
RBF	196.2541738	313.6464364	0.811598164
RBF	205.8598625	302.3590182	0.788980354
RBF	145.7107933	184.4297027	0.891108606
RBF	136.1508379	183.6820335	0.899823637

RBF	160.0521048	285.9294767	0.855288111
RBF	156.3711753	205.2928041	0.846959883
RBF	170.555398	232.3567345	0.818863266
RBF	147.6561911	193.3014557	0.876408845
RBF	137.9913619	184.7867974	0.898873668
RBF	155.1976974	236.2798182	0.87229602
RBF	213.0368675	323.5050865	0.792917032
RBF	144.3900282	232.0029736	0.809041754
RBF	156.9787925	207.3934681	0.885506922
RBF	152.2256617	215.5828163	0.886302241
RBF	162.1911342	232.7485089	0.833034657
RBF	183.7689879	284.8704314	0.858339365
RBF	170.7591561	266.4940022	0.844392614
RBF	177.8848472	294.979878	0.776937776
RBF	152.0130877	203.8784441	0.867692657
RBF	130.3557598	184.9497011	0.883528797
RBF	149.8517638	207.0613214	0.907388731
SVR	169.3193869	254.1831811	0.885709051
SVR	143.898444	240.3086238	0.864607456
SVR	142.4505225	206.9095853	0.87389928
SVR	114.4171545	144.973302	0.924872394
SVR	166.8015806	284.2797896	0.797220479
SVR	153.5666945	216.5995898	0.876691842
SVR	193.1655022	370.7254871	0.827227033
SVR	145.0688545	195.9714909	0.88310517
SVR	136.4520851	156.2586138	0.900808865
SVR	121.9551875	188.203529	0.922553602
SVR	124.3239525	167.8495522	0.90322418
SVR	156.5492272	248.6340724	0.863947409
SVR	195.5975833	337.4621718	0.822087889
SVR	143.1263626	189.1334368	0.919921051
SVR	135.6829301	199.0177349	0.870698029
SVR	136.1574023	198.3776151	0.891903584
SVR	141.7515528	187.6667512	0.889041454
SVR	158.7693144	280.4770581	0.827082577
SVR	177.7295967	305.6477374	0.817503223
SVR	133.7576242	173.0237627	0.909123355
SVR	139.1392941	184.7319337	0.853130677
SVR	176.753526	322.1107671	0.820168626
SVR	147.404754	223.3131383	0.920919747
SVR	131.2783698	207.6305114	0.885816755
SVR	142.6487192	200.9875299	0.904211457
SVR	162.7484641	234.0043982	0.889078699

SVR	132.0442351	173.6694425	0.893865214
SVR	108.1486884	133.1067669	0.919326768
SVR	146.1375347	243.512773	0.857081408
SVR	183.566601	330.771371	0.820460837
SVR	170.727708	270.4687548	0.846223367
SVR	139.5506019	171.9184397	0.902174143
SVR	137.2469409	189.3853443	0.911677959
SVR	164.9731378	312.6570646	0.836422846
SVR	126.275367	189.2158338	0.866987442
SVR	155.070386	232.0514709	0.801329204
SVR	111.3052048	164.7640341	0.918301307
SVR	127.1567767	169.4266582	0.912551468
SVR	145.8161745	214.4679096	0.924900433
SVR	194.4827625	333.1412181	0.803457764
SVR	131.0953209	193.3740054	0.870683683
SVR	142.4606988	189.964346	0.902140386
SVR	160.7865427	251.4286331	0.869249999
SVR	131.2447093	212.147326	0.842390416
SVR	175.7521504	300.192103	0.861305686
SVR	152.4749077	232.9133883	0.902423577
SVR	158.2806367	279.7614942	0.808935637
SVR	145.2068802	198.8333128	0.877670785
SVR	134.5474211	210.7963702	0.853422246
SVR	140.6517059	225.3313258	0.903992522

Coefficient of determination (R^2), the Root Mean Square Error (RMSE) and the Mean Absolute Errors (MAE)

Table S3. Analysis performance of random forest (RF), radial basis function (RBF), and support vector regression (SVR) algorithms for soybean fresh biomass (FBIO) prediction using yield component traits.

Algorithm	MAE (g m ⁻²)	RMSE (g m ⁻²)	Coefficient of determination (R ²)
RF	119.7975	148.1414	0.916044
RF	110.2672	143.6928	0.898237
RF	106.1645	128.2284	0.921452
RF	100.1349	122.8048	0.921412
RF	114.0916	149.9142	0.892765
RF	107.7502	133.5622	0.919392
RF	136.5886	169.8279	0.876284
RF	100.7597	119.4719	0.942066
RF	117.6463	151.569	0.884445
RF	111.8181	141.0908	0.912701
RF	111.1065	139.9799	0.909079
RF	136.6951	171.3069	0.855634
RF	104.9303	133.872	0.926967
RF	118.5584	143.4742	0.906125
RF	111.8948	147.6642	0.899771
RF	102.8167	133.2284	0.916527
RF	136.285	164.3982	0.871049
RF	110.7273	155.2275	0.897836
RF	105.2721	125.9429	0.930583
RF	99.7785	125.3235	0.9298
RF	107.0931	137.8202	0.902705
RF	108.8778	123.8896	0.929514
RF	100.4996	125.6673	0.935775
RF	111.8781	145.5287	0.905015
RF	127.3078	167.4374	0.876435
RF	116.4748	142.3661	0.915979
RF	110.5773	147.9834	0.901971
RF	107.1008	135.1511	0.900116
RF	95.47278	130.8587	0.921422
RF	119.3775	140.1423	0.922016
RF	115.9131	146.6371	0.905605
RF	99.82979	131.4242	0.922448
RF	103.365	131.1631	0.928199
RF	134.2205	162.0426	0.879752
RF	110.6957	140.9505	0.895337
RF	115.0112	151.9779	0.87949
RF	117.3989	158.8426	0.87588
RF	114.9733	148.3849	0.902559

RF	110.7049	129.3245	0.939484
RF	107.2785	123.5176	0.928689
RF	93.96014	116.238	0.92401
RF	107.2756	137.4207	0.925565
RF	100.7429	125.7191	0.934332
RF	106.1249	127.1983	0.906393
RF	139.2655	178.2483	0.874327
RF	119.7131	161.2743	0.893249
RF	111.7995	145.2406	0.902386
RF	113.734	146.0043	0.896196
RF	107.7184	132.2833	0.900077
RF	105.6949	122.2875	0.947621
RBF	93.41103	111.7797	0.955225
RBF	85.39414	105.082	0.944757
RBF	90.18155	117.7106	0.934235
RBF	96.75184	113.9804	0.932339
RBF	101.2754	124.0534	0.928459
RBF	92.50441	107.5343	0.94863
RBF	92.11284	112.781	0.944444
RBF	91.78491	120.0431	0.940552
RBF	111.0718	129.6541	0.917957
RBF	91.79651	116.6371	0.944356
RBF	89.14871	109.7135	0.945941
RBF	103.2617	126.511	0.930062
RBF	85.02968	102.755	0.959404
RBF	94.90637	109.8189	0.951969
RBF	108.4197	137.7227	0.908208
RBF	91.10199	105.8473	0.948014
RBF	102.8248	121.6717	0.929701
RBF	92.63952	115.423	0.942842
RBF	101.0645	135.147	0.919571
RBF	89.66994	108.9033	0.94932
RBF	102.3873	126.6338	0.917349
RBF	99.13121	123.9217	0.930152
RBF	82.53234	96.3069	0.968263
RBF	88.80952	113.4791	0.942513
RBF	100.7627	120.4183	0.93747
RBF	107.001	132.0483	0.929261
RBF	96.08942	120.468	0.931921
RBF	91.81762	107.4533	0.936132
RBF	90.18858	115.8784	0.938099
RBF	82.88174	99.21514	0.962078
RBF	101.9572	132.5091	0.918576

RBF	92.25789	112.8294	0.940787
RBF	83.43907	98.93	0.959095
RBF	91.12766	107.1789	0.950698
RBF	100.9256	124.7097	0.919113
RBF	112.9048	134.8489	0.905831
RBF	91.7331	114.089	0.936687
RBF	86.9929	101.501	0.95771
RBF	96.0831	119.6358	0.948123
RBF	94.80073	113.9383	0.940324
RBF	94.31312	118.9435	0.919788
RBF	90.85541	109.2606	0.955173
RBF	93.25251	119.6226	0.940368
RBF	92.96258	110.9872	0.928293
RBF	106.8059	128.2234	0.941275
RBF	97.1596	131.7042	0.931538
RBF	91.41567	111.6411	0.942668
RBF	98.10604	118.6544	0.931507
RBF	94.0315	111.2507	0.928674
RBF	86.83321	101.8235	0.963055
SVR	94.51651	111.0089	0.956204
SVR	85.07574	102.711	0.948514
SVR	94.43239	114.0867	0.944061
SVR	93.3968	106.9398	0.945375
SVR	103.4971	119.4833	0.934489
SVR	101.4538	116.8256	0.939164
SVR	86.59942	103.3951	0.960111
SVR	98.85259	121.1884	0.939179
SVR	112.0184	129.8826	0.919976
SVR	84.17188	98.64961	0.962204
SVR	92.37943	114.9125	0.941388
SVR	97.06402	111.2485	0.943611
SVR	100.243	117.3712	0.945837
SVR	91.51115	107.2708	0.954769
SVR	98.83634	115.3385	0.9366
SVR	94.36231	107.5964	0.947994
SVR	104.8689	121.624	0.927531
SVR	92.11001	108.4468	0.948885
SVR	109.8608	129.485	0.924026
SVR	89.07842	106.8196	0.950056
SVR	103.1966	122.565	0.921943
SVR	99.622	112.3747	0.943951
SVR	92.36352	110.1389	0.957031
SVR	90.81369	107.6235	0.948475

SVR	105.0717	127.2379	0.931516
SVR	100.7682	115.0609	0.947694
SVR	91.94235	112.9972	0.94265
SVR	95.84098	108.0575	0.934759
SVR	95.55339	112.6115	0.942497
SVR	91.08859	109.7267	0.952543
SVR	92.61422	107.3912	0.947799
SVR	97.09481	115.4407	0.938544
SVR	90.89481	108.9887	0.949821
SVR	96.53723	112.7428	0.947326
SVR	94.41556	112.9802	0.934302
SVR	101.7897	121.7234	0.919102
SVR	87.64503	108.7332	0.94324
SVR	100.2869	113.4994	0.94792
SVR	89.21886	102.1397	0.963119
SVR	104.0221	118.7827	0.933476
SVR	93.67412	107.9619	0.934338
SVR	98.18517	115.7734	0.949085
SVR	99.43682	119.8233	0.947145
SVR	100.7466	119.1365	0.920744
SVR	110.8865	130.4639	0.934299
SVR	84.74723	99.74755	0.963307
SVR	100.5082	120.4548	0.934576
SVR	101.529	119.2003	0.935642
SVR	100.1418	110.516	0.931083
SVR	85.23452	103.0854	0.960316

Coefficient of determination (R^2), the Root Mean Square Error (RMSE) and the Mean Absolute Errors (MAE)