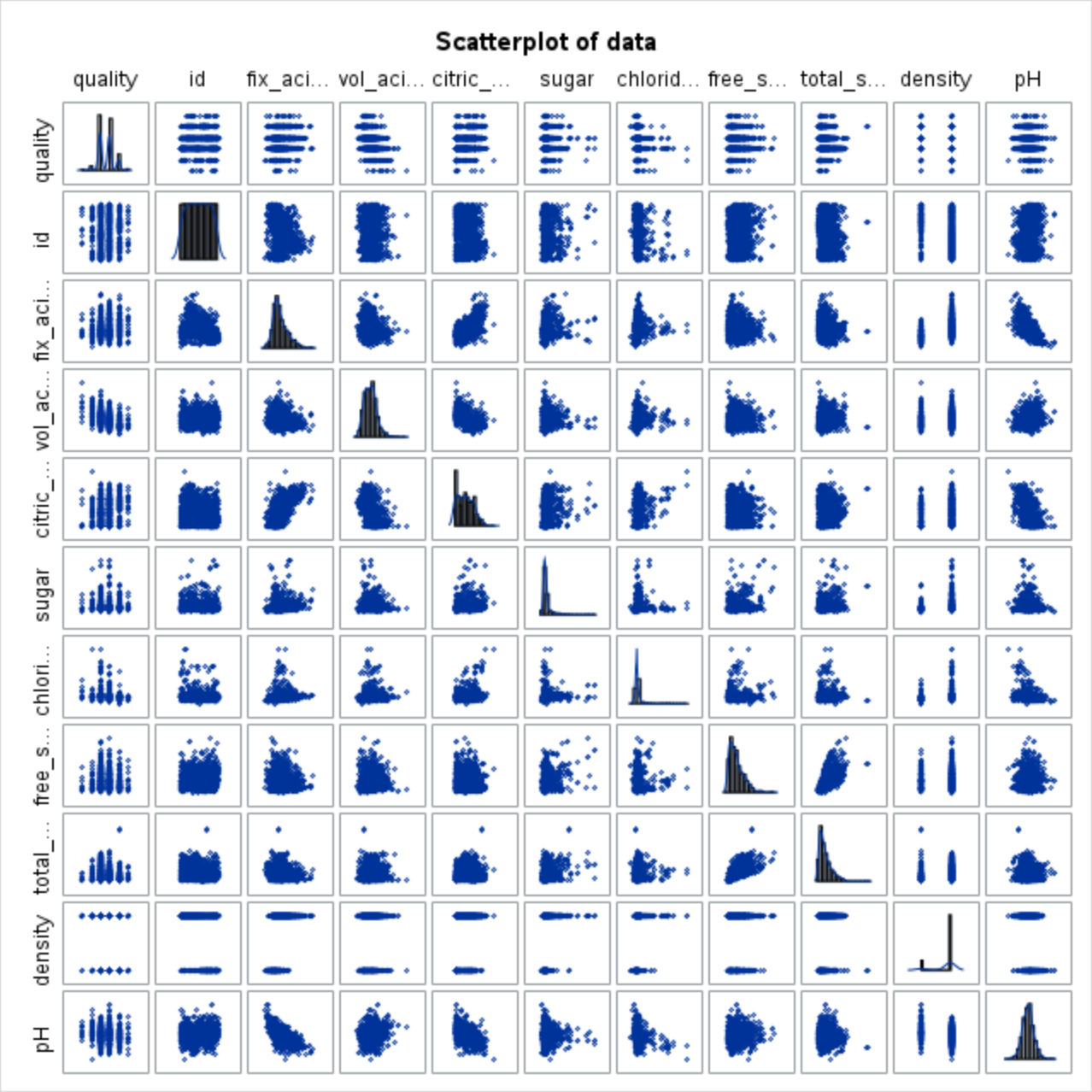


Stepwise Selection

The REG Procedure
Model: MODEL1
Dependent Variable: quality

Adjusted R-Square Selection Method

Number of Observations Read	1599
Number of Observations Used	1599

Number in Model	Adjusted R-Square	R-Square	AIC	Variables in Model
7	0.3572	0.3600	-1382.2341	vol_acidity chlorides free_sulfur total_sulfur pH sulphates alcohol
6	0.3554	0.3578	-1378.5568	vol_acidity chlorides total_sulfur pH sulphates alcohol
6	0.3507	0.3532	-1367.1591	vol_acidity chlorides free_sulfur total_sulfur sulphates alcohol
5	0.3500	0.3520	-1366.2685	vol_acidity chlorides total_sulfur sulphates alcohol

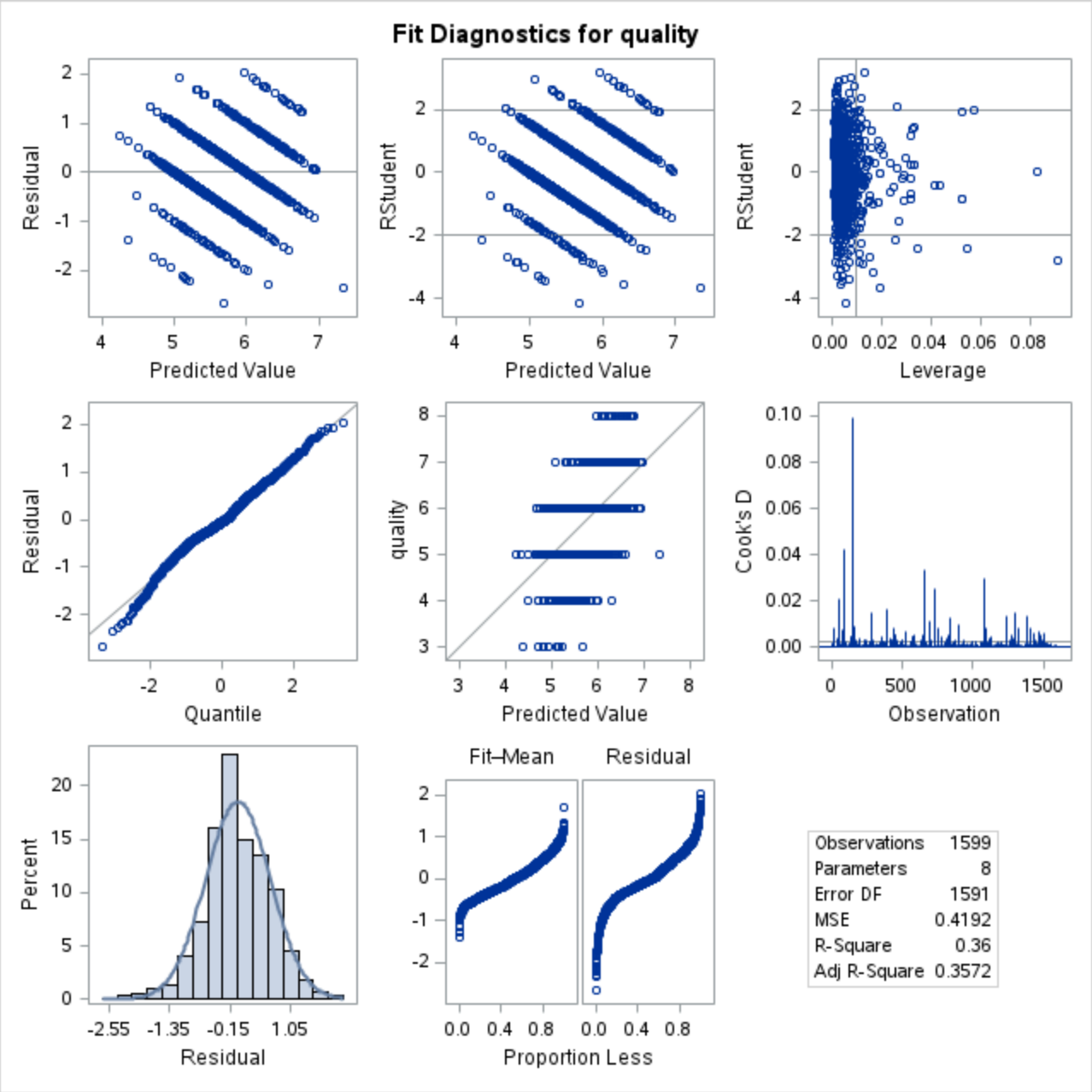
Number in Model	Adjusted R-Square	R-Square	AIC	Variables in Model
6	0.3472	0.3497	-1358.4932	vol_acidity chlorides free_sulfur pH sulphates alcohol
5	0.3468	0.3488	-1358.4479	vol_acidity chlorides pH sulphates alcohol
6	0.3467	0.3491	-1357.1258	vol_acidity free_sulfur total_sulfur pH sulphates alcohol
5	0.3449	0.3470	-1353.8915	vol_acidity total_sulfur pH sulphates alcohol
5	0.3430	0.3451	-1349.2612	vol_acidity free_sulfur total_sulfur sulphates alcohol
5	0.3428	0.3448	-1348.6744	vol_acidity chlorides free_sulfur sulphates alcohol
4	0.3421	0.3438	-1348.1049	vol_acidity total_sulfur sulphates alcohol
4	0.3419	0.3435	-1347.4780	vol_acidity chlorides sulphates alcohol
5	0.3375	0.3396	-1335.8198	vol_acidity free_sulfur pH sulphates alcohol
4	0.3372	0.3388	-1336.0432	vol_acidity pH sulphates alcohol
4	0.3353	0.3370	-1331.5566	vol_acidity free_sulfur sulphates alcohol
3	0.3346	0.3359	-1330.9611	vol_acidity sulphates alcohol
6	0.3312	0.3338	-1319.8471	vol_acidity chlorides free_sulfur total_sulfur pH alcohol
5	0.3297	0.3318	-1317.2506	vol_acidity free_sulfur total_sulfur pH alcohol
5	0.3290	0.3311	-1315.4782	vol_acidity chlorides total_sulfur pH alcohol
4	0.3276	0.3293	-1313.1734	vol_acidity total_sulfur pH alcohol
5	0.3228	0.3249	-1300.7357	vol_acidity chlorides free_sulfur total_sulfur alcohol
4	0.3227	0.3244	-1301.6547	vol_acidity free_sulfur total_sulfur alcohol
4	0.3227	0.3244	-1301.6296	vol_acidity chlorides pH alcohol
5	0.3226	0.3247	-1300.3548	vol_acidity chlorides free_sulfur pH alcohol
4	0.3219	0.3236	-1299.6167	vol_acidity chlorides total_sulfur alcohol
3	0.3218	0.3231	-1300.4790	vol_acidity total_sulfur alcohol
3	0.3214	0.3227	-1299.5345	vol_acidity pH alcohol
4	0.3213	0.3230	-1298.3000	vol_acidity free_sulfur pH alcohol
6	0.3171	0.3197	-1286.3578	chlorides free_sulfur total_sulfur pH sulphates alcohol
4	0.3164	0.3181	-1286.7162	vol_acidity chlorides free_sulfur alcohol
3	0.3163	0.3176	-1287.5629	vol_acidity free_sulfur alcohol
3	0.3162	0.3174	-1287.1765	vol_acidity chlorides alcohol
2	0.3161	0.3170	-1288.0566	vol_acidity alcohol
5	0.3127	0.3148	-1277.1042	chlorides total_sulfur pH sulphates alcohol
5	0.3014	0.3036	-1251.0644	chlorides free_sulfur pH sulphates alcohol
4	0.3014	0.3031	-1252.0049	chlorides pH sulphates alcohol
5	0.2968	0.2990	-1240.5742	free_sulfur total_sulfur pH sulphates alcohol
5	0.2959	0.2981	-1238.4988	chlorides free_sulfur total_sulfur sulphates alcohol
4	0.2940	0.2958	-1235.1502	chlorides total_sulfur sulphates alcohol
4	0.2923	0.2941	-1231.4306	total_sulfur pH sulphates alcohol
4	0.2839	0.2857	-1212.5257	chlorides free_sulfur sulphates alcohol
3	0.2832	0.2845	-1211.8348	chlorides sulphates alcohol
3	0.2820	0.2833	-1209.1681	pH sulphates alcohol
4	0.2819	0.2836	-1207.8988	free_sulfur pH sulphates alcohol
4	0.2813	0.2831	-1206.6831	free_sulfur total_sulfur sulphates alcohol
3	0.2791	0.2804	-1202.6789	total_sulfur sulphates alcohol
3	0.2694	0.2708	-1181.4323	free_sulfur sulphates alcohol
5	0.2693	0.2716	-1179.2671	chlorides free_sulfur total_sulfur pH alcohol
2	0.2690	0.2699	-1181.4774	sulphates alcohol
4	0.2652	0.2671	-1171.3068	free_sulfur total_sulfur pH alcohol
4	0.2632	0.2651	-1166.9959	chlorides total_sulfur pH alcohol
3	0.2593	0.2607	-1159.4823	total_sulfur pH alcohol
3	0.2549	0.2563	-1150.0701	chlorides pH alcohol

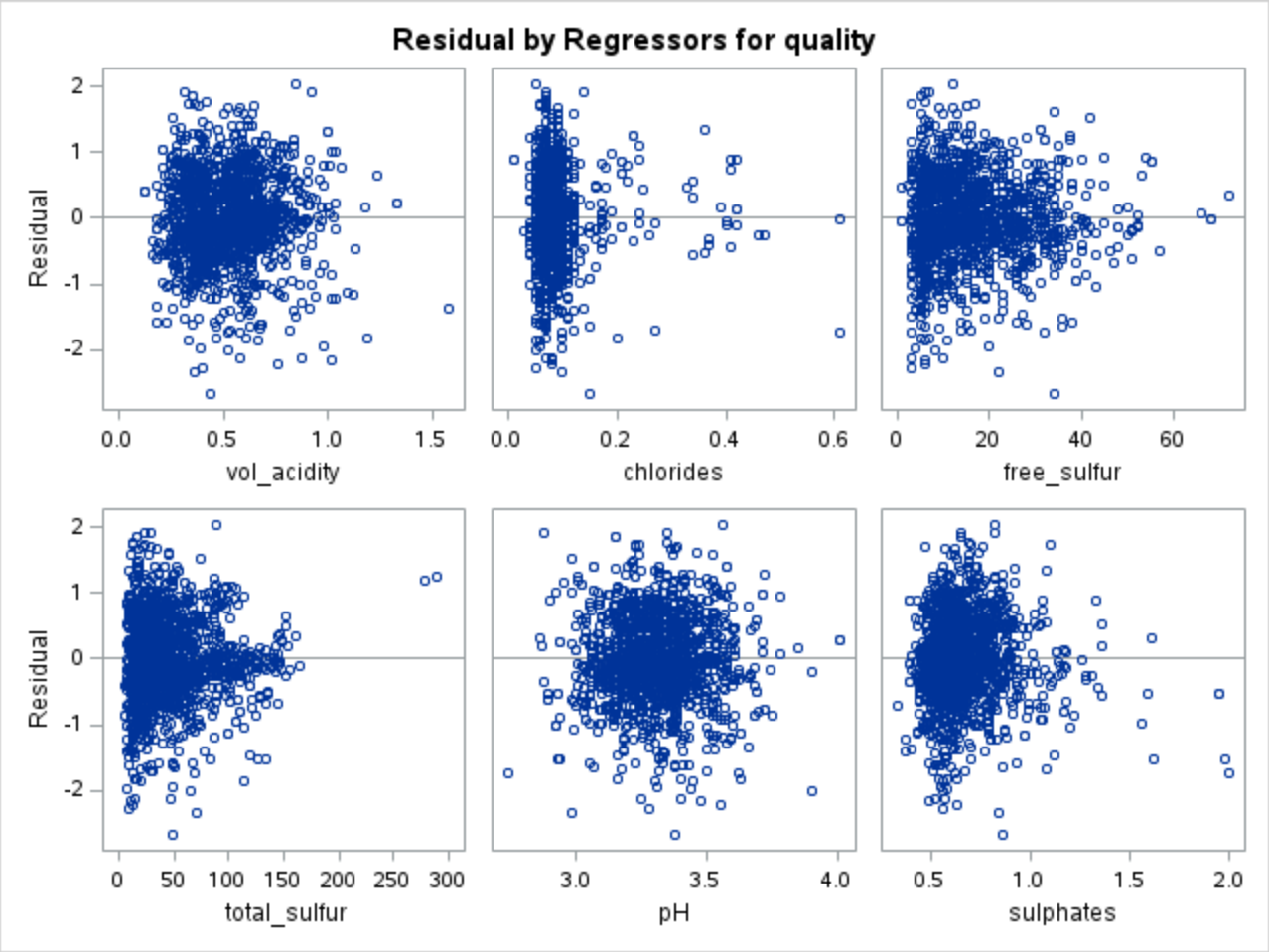
Number in Model	Adjusted R-Square	R-Square	AIC	Variables in Model
4	0.2545	0.2563	-1148.0950	chlorides free_sulfur pH alcohol
2	0.2511	0.2520	-1142.8308	pH alcohol
3	0.2506	0.2520	-1140.8630	free_sulfur pH alcohol
5	0.2383	0.2407	-1112.7962	vol_acidity chlorides free_sulfur total_sulfur sulphates
6	0.2380	0.2408	-1111.0843	vol_acidity chlorides free_sulfur total_sulfur pH sulphates
4	0.2367	0.2386	-1110.3158	chlorides free_sulfur total_sulfur alcohol
3	0.2364	0.2379	-1110.8238	free_sulfur total_sulfur alcohol
4	0.2354	0.2373	-1107.6702	vol_acidity chlorides total_sulfur sulphates
5	0.2349	0.2373	-1105.6724	vol_acidity chlorides total_sulfur pH sulphates
3	0.2340	0.2354	-1105.7378	chlorides total_sulfur alcohol
2	0.2337	0.2347	-1106.1436	total_sulfur alcohol
2	0.2265	0.2275	-1091.2236	chlorides alcohol
3	0.2264	0.2278	-1089.8948	chlorides free_sulfur alcohol
1	0.2262	0.2267	-1091.6482	alcohol
2	0.2261	0.2270	-1090.2927	free_sulfur alcohol
4	0.2130	0.2150	-1061.5644	vol_acidity chlorides free_sulfur sulphates
5	0.2128	0.2153	-1060.1542	vol_acidity chlorides free_sulfur pH sulphates
3	0.2091	0.2106	-1054.6534	vol_acidity chlorides sulphates
4	0.2088	0.2107	-1052.9245	vol_acidity chlorides pH sulphates
5	0.2070	0.2095	-1048.4508	vol_acidity free_sulfur total_sulfur pH sulphates
4	0.2064	0.2084	-1048.1889	vol_acidity free_sulfur total_sulfur sulphates
4	0.2042	0.2062	-1043.6641	vol_acidity total_sulfur pH sulphates
3	0.2027	0.2041	-1041.6161	vol_acidity total_sulfur sulphates
4	0.1890	0.1911	-1013.5477	vol_acidity chlorides free_sulfur total_sulfur
5	0.1889	0.1914	-1012.2958	vol_acidity chlorides free_sulfur total_sulfur pH
3	0.1855	0.1870	-1007.5819	vol_acidity chlorides total_sulfur
4	0.1850	0.1871	-1005.7005	vol_acidity chlorides total_sulfur pH
4	0.1824	0.1844	-1000.5201	vol_acidity free_sulfur pH sulphates
3	0.1797	0.1812	-996.2278	vol_acidity free_sulfur total_sulfur
4	0.1793	0.1813	-994.4020	vol_acidity free_sulfur total_sulfur pH
3	0.1789	0.1804	-994.6967	vol_acidity free_sulfur sulphates
3	0.1783	0.1798	-993.5018	vol_acidity pH sulphates
2	0.1757	0.1768	-989.5499	vol_acidity total_sulfur
3	0.1757	0.1772	-988.4344	vol_acidity total_sulfur pH
2	0.1755	0.1765	-989.0045	vol_acidity sulphates
5	0.1675	0.1701	-970.6644	chlorides free_sulfur total_sulfur pH sulphates
3	0.1655	0.1670	-968.7129	vol_acidity chlorides free_sulfur
4	0.1650	0.1671	-966.8536	vol_acidity chlorides free_sulfur pH
2	0.1630	0.1640	-965.0056	vol_acidity chlorides
3	0.1625	0.1641	-963.0394	vol_acidity chlorides pH
4	0.1610	0.1631	-959.1814	chlorides free_sulfur total_sulfur sulphates
4	0.1599	0.1620	-957.0932	chlorides total_sulfur pH sulphates
3	0.1555	0.1570	-949.6675	vol_acidity free_sulfur pH
3	0.1554	0.1570	-949.6145	chlorides total_sulfur sulphates
2	0.1545	0.1555	-948.7776	vol_acidity free_sulfur
2	0.1526	0.1537	-945.3579	vol_acidity pH
1	0.1520	0.1525	-945.0694	vol_acidity
4	0.1269	0.1291	-895.5201	chlorides free_sulfur pH sulphates
3	0.1244	0.1261	-891.9686	chlorides free_sulfur sulphates

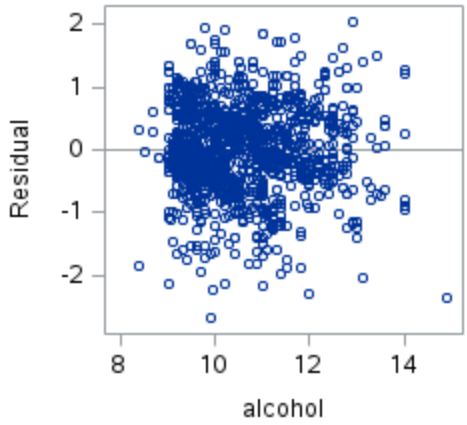
Number in Model	Adjusted R-Square	R-Square	AIC	Variables in Model
3	0.1234	0.1251	-890.1796	chlorides pH sulphates
2	0.1204	0.1215	-885.5437	chlorides sulphates
4	0.1088	0.1110	-862.6175	free_sulfur total_sulfur pH sulphates
3	0.1081	0.1097	-862.3748	free_sulfur total_sulfur sulphates
2	0.1005	0.1016	-849.8972	total_sulfur sulphates
3	0.1004	0.1021	-848.6175	total_sulfur pH sulphates
4	0.0707	0.0730	-795.7828	chlorides free_sulfur total_sulfur pH
2	0.0661	0.0673	-789.8362	free_sulfur sulphates
3	0.0655	0.0673	-787.8541	free_sulfur pH sulphates
1	0.0626	0.0632	-784.8891	sulphates
2	0.0621	0.0633	-783.0113	pH sulphates
3	0.0590	0.0608	-776.7798	chlorides total_sulfur pH
3	0.0565	0.0583	-772.4918	chlorides free_sulfur total_sulfur
3	0.0495	0.0513	-760.7352	free_sulfur total_sulfur pH
2	0.0483	0.0495	-759.7160	chlorides total_sulfur
2	0.0427	0.0439	-750.2114	free_sulfur total_sulfur
2	0.0380	0.0392	-742.4217	total_sulfur pH
1	0.0337	0.0343	-736.2425	total_sulfur
3	0.0266	0.0284	-722.5899	chlorides free_sulfur pH
2	0.0253	0.0265	-721.5020	chlorides pH
2	0.0187	0.0199	-710.6181	chlorides free_sulfur
1	0.0167	0.0174	-708.4987	chlorides
2	0.0043	0.0055	-687.3391	free_sulfur pH
1	0.0027	0.0033	-685.8350	pH
1	0.0019	0.0026	-684.6052	free_sulfur

Stepwise Selection

The REG Procedure
Model: MODEL1
Dependent Variable: quality


Fit Diagnostics for quality
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
quality
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 1599
Parameters 8
Error DF 1591
MSE 0.4192
R-Square 0.36
Adj R-Square 0.3572


Residual by Regressors for quality
Residual
vol_acidity
chlorides
free_sulfur
total_sulfur
pH
sulphates



Forward Selection

The REG Procedure
Model: MODEL1
Dependent Variable: quality

Number of Observations Read	1599
Number of Observations Used	1599

Forward Selection: Step 1

Variable alcohol Entered: R-Square = 0.2267 and C(p) = 327.4438

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	236.29279	236.29279	468.26	<.0001
Error	1597	805.87231	0.50462		
Corrected Total	1598	1042.16510			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	1.87502	0.17471	58.12245	115.18	<.0001
alcohol	0.36084	0.01668	236.29279	468.26	<.0001

Bounds on condition number: 1, 1

Forward Selection: Step 2

Variable vol_acidity Entered: R-Square = 0.3170 and C(p) = 105.1076

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	330.33266	165.16633	370.32	<.0001
Error	1596	711.83245	0.44601		
Corrected Total	1598	1042.16510			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.09370	0.18445	125.47003	281.32	<.0001
vol_acidity	-1.37875	0.09495	94.03987	210.85	<.0001
alcohol	0.31381	0.01601	171.40529	384.31	<.0001

Bounds on condition number: 1.0427, 4.1707

Forward Selection: Step 3

Variable sulphates Entered: R-Square = 0.3359 and C(p) = 60.0833

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	350.04487	116.68162	268.89	<.0001
Error	1595	692.12024	0.43393		
Corrected Total	1598	1042.16510			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.60914	0.19563	77.19066	177.89	<.0001
vol_acidity	-1.21712	0.09668	68.77538	158.49	<.0001
sulphates	0.67935	0.10079	19.71221	45.43	<.0001
alcohol	0.30921	0.01580	166.10533	382.79	<.0001

Bounds on condition number: 1.111, 9.6919

Forward Selection: Step 4

Variable total_sulfur Entered: R-Square = 0.3438 and C(p) = 42.4337

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	358.28179	89.57045	208.77	<.0001
Error	1594	683.88331	0.42904		
Corrected Total	1598	1042.16510			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	2.82456	0.20064	85.03112	198.19	<.0001
vol_acidity	-1.19449	0.09627	66.05144	153.95	<.0001
total_sulfur	-0.00224	0.00051076	8.23693	19.20	<.0001
sulphates	0.71245	0.10051	21.55750	50.25	<.0001

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
alcohol	0.29529	0.01603	145.52567	339.19	<.0001

Bounds on condition number: 1.1142, 17.337

Forward Selection: Step 5

Variable chlorides Entered: R-Square = 0.3520 and C(p) = 23.9903

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	366.85151	73.37030	173.07	<.0001
Error	1593	675.31359	0.42393		
Corrected Total	1598	1042.16510			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	3.00981	0.20365	92.59849	218.43	<.0001
vol_acidity	-1.13579	0.09658	58.62706	138.30	<.0001
chlorides	-1.75580	0.39051	8.56972	20.22	<.0001
total_sulfur	-0.00232	0.00050804	8.83789	20.85	<.0001
sulphates	0.92016	0.11007	29.62549	69.88	<.0001
alcohol	0.27659	0.01647	119.53606	281.97	<.0001

Bounds on condition number: 1.3123, 29.688

Forward Selection: Step 6

Variable pH Entered: R-Square = 0.3578 and C(p) = 11.6590

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	372.85906	62.14318	147.81	<.0001
Error	1592	669.30605	0.42042		
Corrected Total	1598	1042.16510			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.30995	0.39928	48.98620	116.52	<.0001
vol_acidity	-1.03187	0.10003	44.73448	106.40	<.0001
chlorides	-2.05284	0.39675	11.25507	26.77	<.0001
total_sulfur	-0.00238	0.00050621	9.31856	22.16	<.0001
pH	-0.43827	0.11594	6.00755	14.29	0.0002
sulphates	0.89328	0.10985	27.80237	66.13	<.0001
alcohol	0.29029	0.01680	125.54249	298.61	<.0001

Bounds on condition number: 1.3282, 44.182

Forward Selection: Step 7

Variable free_sulfur Entered: R-Square = 0.3600 and C(p) = 8.0000

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	375.23126	53.60447	127.88	<.0001

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Error	1591	666.93384	0.41919		
Corrected Total	1598	1042.16510			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.44319	0.40261	51.05423	121.79	<.0001
vol_acidity	-1.00664	0.10045	42.09899	100.43	<.0001
chlorides	-2.06652	0.39622	11.40313	27.20	<.0001
free_sulfur	0.00505	0.00212	2.37220	5.66	0.0175
total_sulfur	-0.00349	0.00068647	10.82327	25.82	<.0001
pH	-0.48543	0.11746	7.16007	17.08	<.0001
sulphates	0.88709	0.10972	27.40348	65.37	<.0001
alcohol	0.28894	0.01678	124.23885	296.38	<.0001

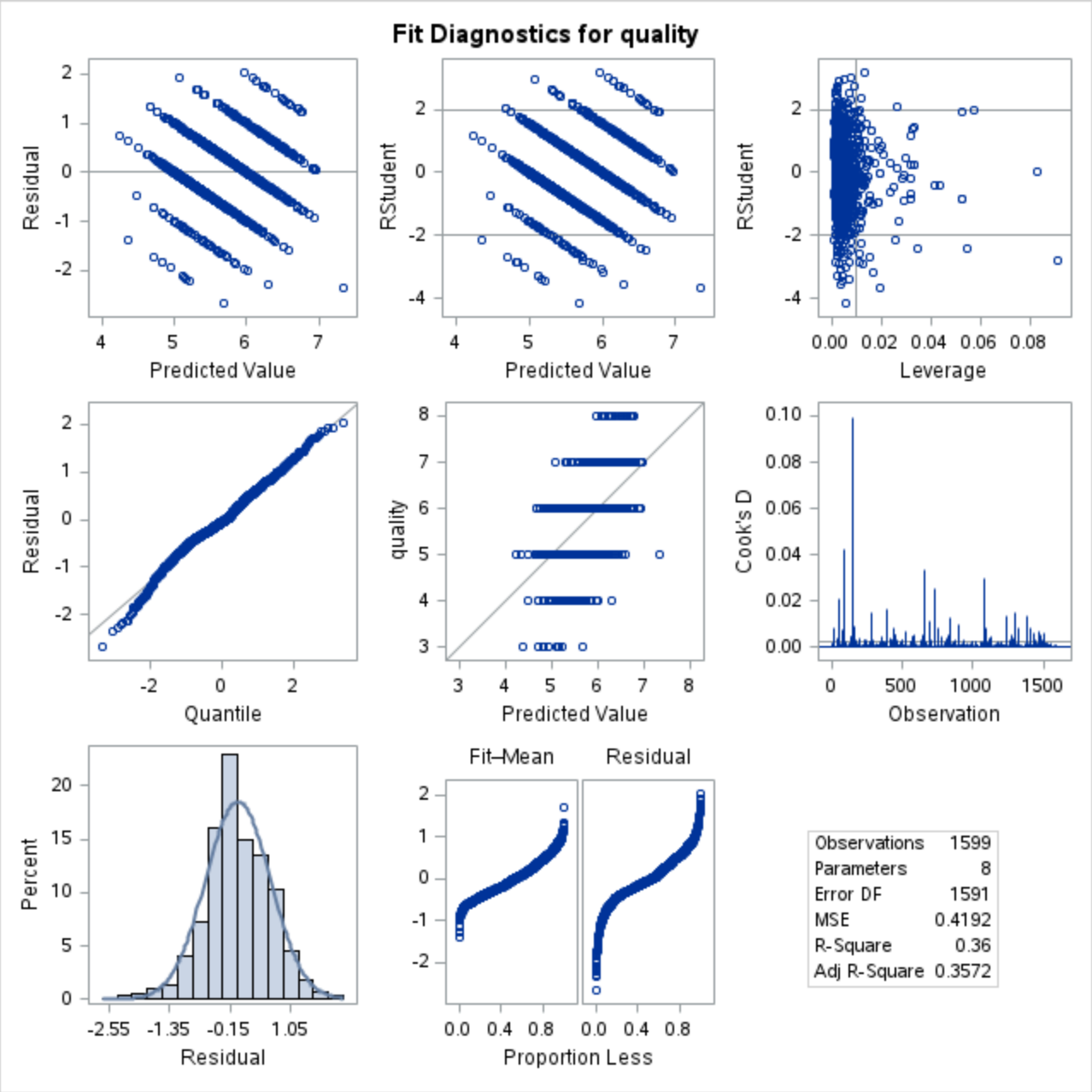
Bounds on condition number: 1.9439, 71.318

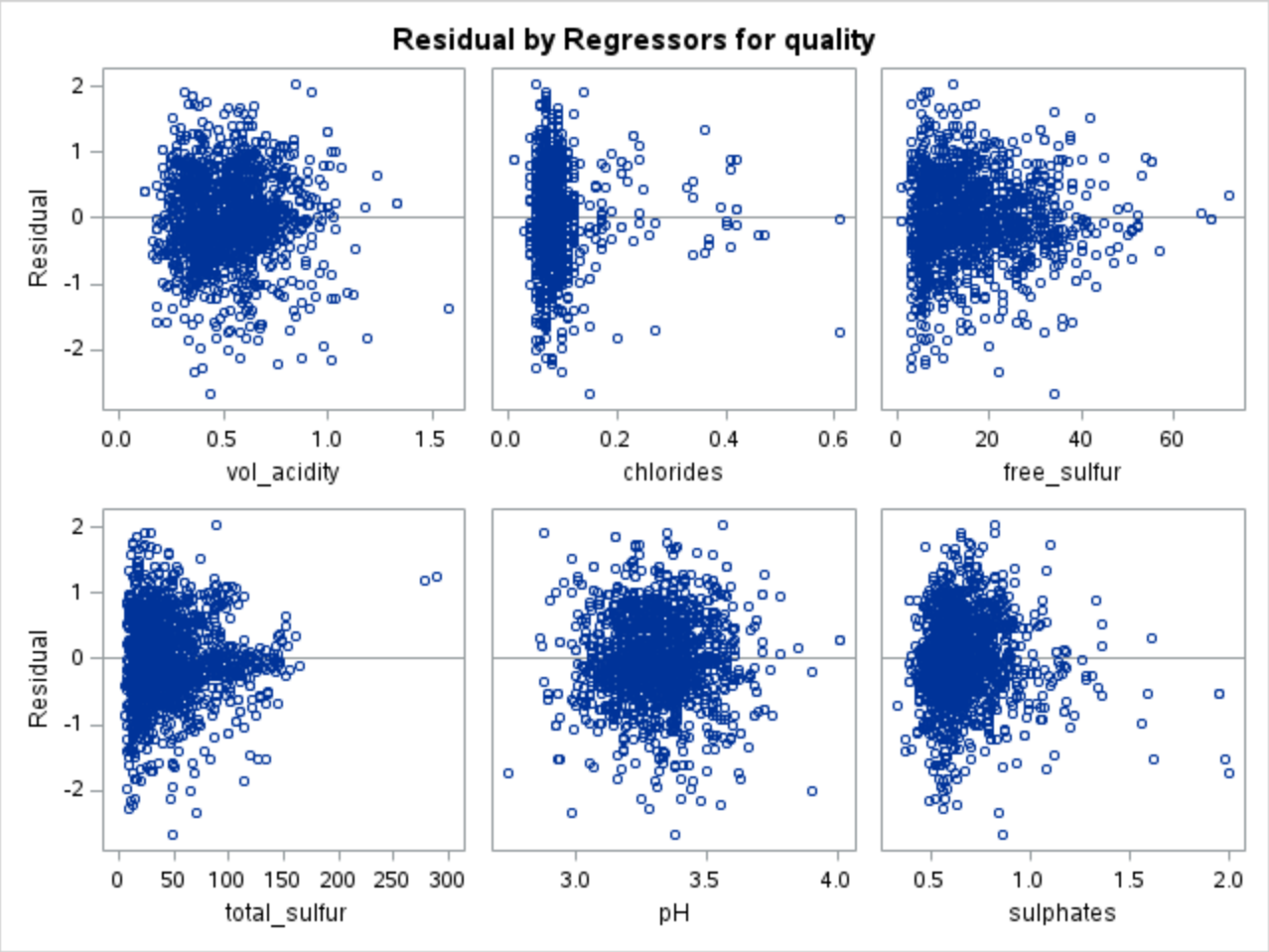
All variables have been entered into the model.

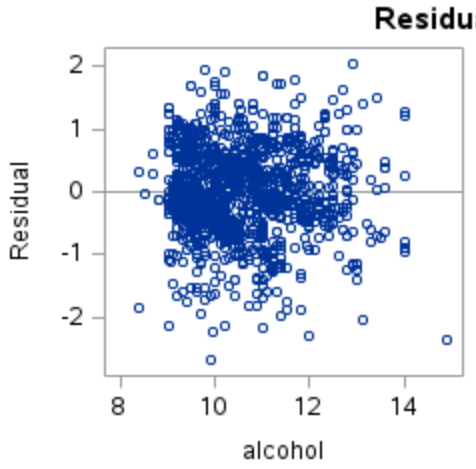
Summary of Forward Selection							
Step	Variable Entered	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	alcohol	1	0.2267	0.2267	327.444	468.26	<.0001
2	vol_acidity	2	0.0902	0.3170	105.108	210.85	<.0001
3	sulphates	3	0.0189	0.3359	60.0833	45.43	<.0001
4	total_sulfur	4	0.0079	0.3438	42.4337	19.20	<.0001
5	chlorides	5	0.0082	0.3520	23.9903	20.22	<.0001
6	pH	6	0.0058	0.3578	11.6590	14.29	0.0002
7	free_sulfur	7	0.0023	0.3600	8.0000	5.66	0.0175

Forward Selection

The REG Procedure
Model: MODEL1
Dependent Variable: quality


Fit Diagnostics for quality
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
quality
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 1599
Parameters 8
Error DF 1591
MSE 0.4192
R-Square 0.36
Adj R-Square 0.3572


Residual by Regressors for quality
Residual
vol_acidity
chlorides
free_sulfur
total_sulfur
pH
sulphates



Backward Selection

The REG Procedure
Model: MODEL1
Dependent Variable: quality

Number of Observations Read	1599
Number of Observations Used	1599

Backward Elimination: Step 0

All Variables Entered: R-Square = 0.3600 and C(p) = 8.0000

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	375.23126	53.60447	127.88	<.0001
Error	1591	666.93384	0.41919		
Corrected Total	1598	1042.16510			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	4.44319	0.40261	51.05423	121.79	<.0001
vol_acidity	-1.00664	0.10045	42.09899	100.43	<.0001
chlorides	-2.06652	0.39622	11.40313	27.20	<.0001
free_sulfur	0.00505	0.00212	2.37220	5.66	0.0175

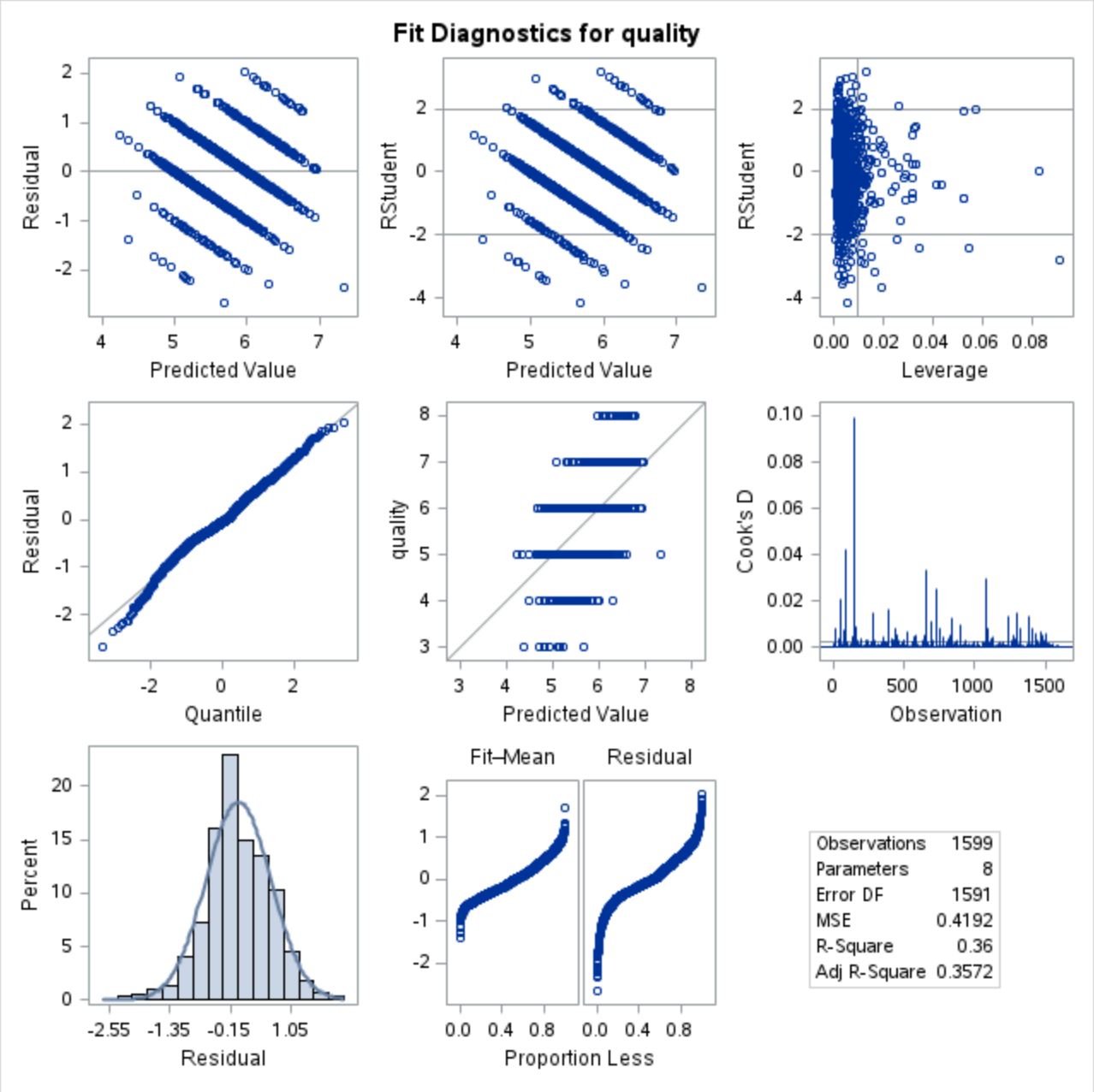
Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
total_sulfur	-0.00349	0.00068647	10.82327	25.82	<.0001
pH	-0.48543	0.11746	7.16007	17.08	<.0001
sulphates	0.88709	0.10972	27.40348	65.37	<.0001
alcohol	0.28894	0.01678	124.23885	296.38	<.0001

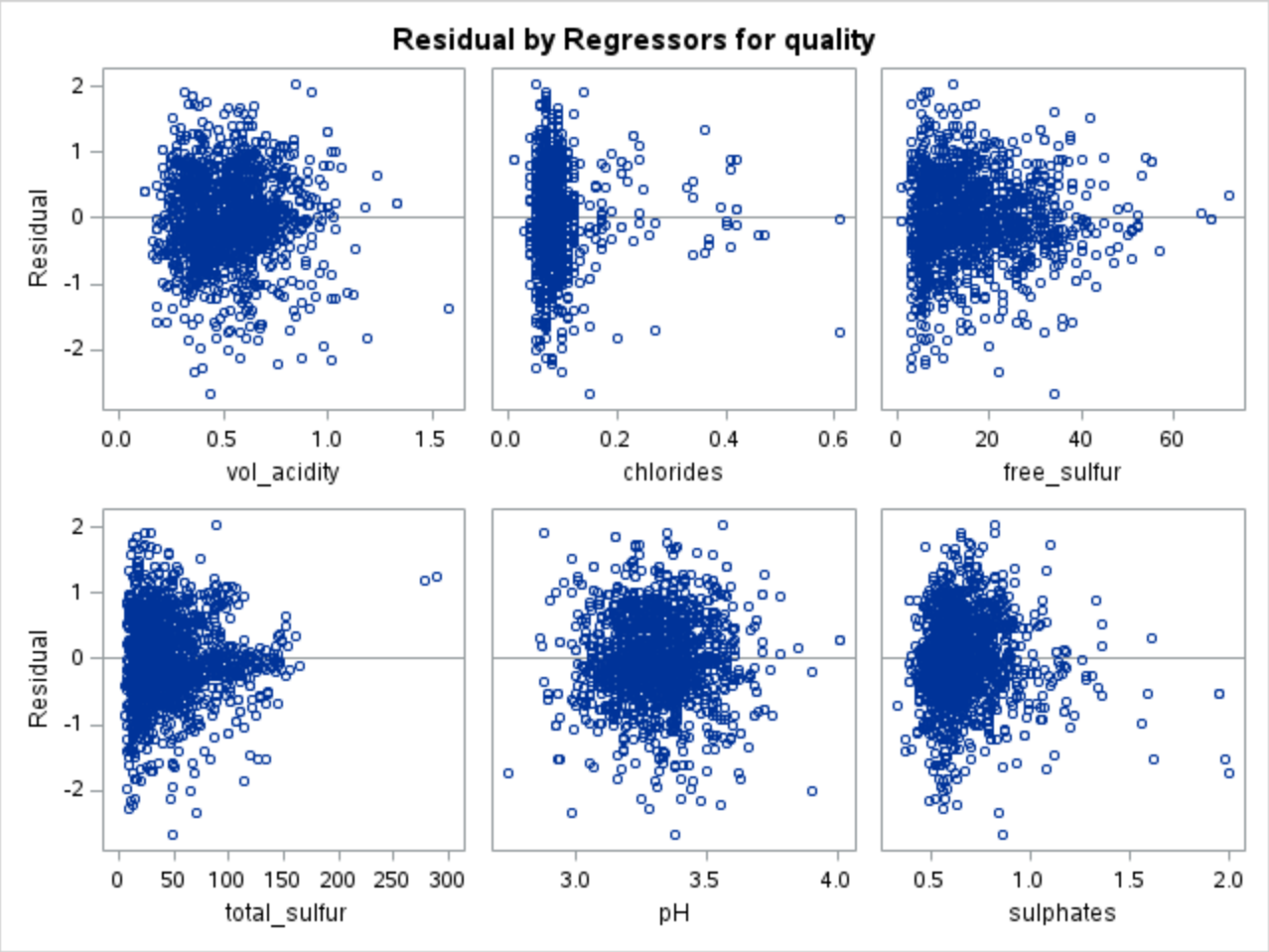
Bounds on condition number: 1.9439, 71.318

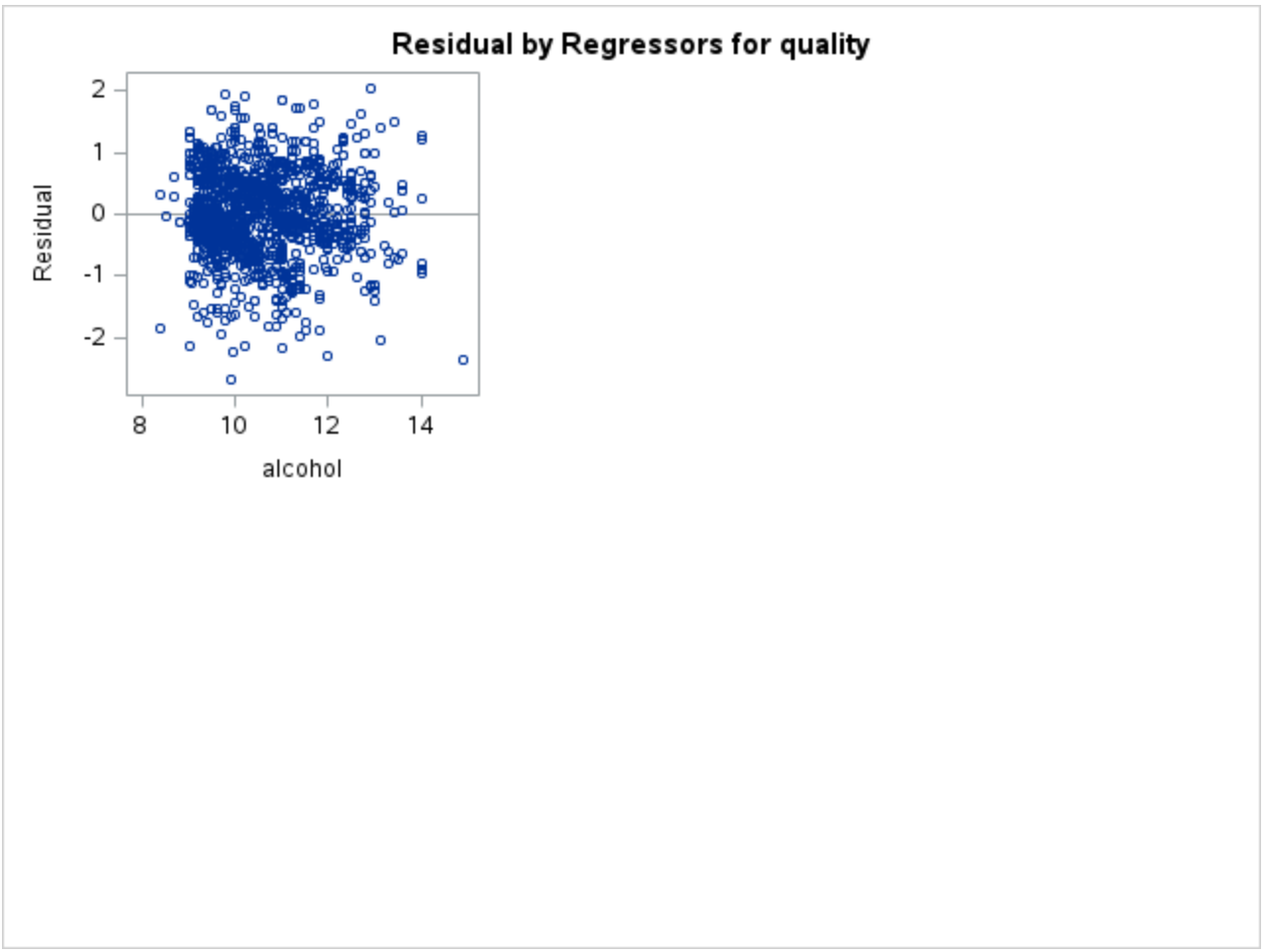
All variables left in the model are significant at the 0.1000 level.

Backward Selection

The REG Procedure
Model: MODEL1
Dependent Variable: quality




Residual by Regressors for quality
Residual
vol_acidity
chlorides
free_sulfur
total_sulfur
pH
sulphates



Lasso procedure

The GLMSELECT Procedure

Data Set	WORK.WINE
Dependent Variable	quality
Selection Method	LASSO
Stop Criterion	SBC
Effect Hierarchy Enforced	None

Number of Observations Read	1599
Number of Observations Used	1599

Dimensions	
Number of Effects	8
Number of Parameters	8

Lasso procedure

The GLMSELECT Procedure

LASSO Selection Summary				
Step	**Effect Entered**	**Effect Removed**	**Number Effects In**	**SBC**

LASSO Selection Summary				
Step	Effect Entered	Effect Removed	Number Effects In	SBC
0	Intercept		1	-677.1197
1	alcohol		2	-821.8272
2	vol_acidity		3	-1139.7754
3	sulphates		4	-1251.2703
4	total_sulfur		5	-1283.2733
5	chlorides		6	-1292.6707
6	pH		7	-1334.7959
7	free_sulfur		8	-1339.2171*
* Optimal Value of Criterion				

Selection stopped because all effects are in the final model.

Lasso procedure

The GLMSELECT Procedure
Selected Model

The selected model is the model at the last step (Step 7).

Effects:	Intercept vol_acidity chlorides free_sulfur total_sulfur pH sulphates alcohol

Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
Model	7	375.23126	53.60447	127.88
Error	1591	666.93384	0.41919	
Corrected Total	1598	1042.16510		

Root MSE	0.64745
Dependent Mean	5.63602
R-Square	0.3600
Adj R-Sq	0.3572
AIC	218.76587
AICC	218.87915
SBC	-1339.21706

Parameter Estimates		
Parameter	DF	Estimate
Intercept	1	4.443192
vol_acidity	1	-1.006636
chlorides	1	-2.066517
free_sulfur	1	0.005054
total_sulfur	1	-0.003488
pH	1	-0.485430
sulphates	1	0.887095
alcohol	1	0.288944

Ridge procedure

The REG Procedure
Model: MODEL1
Dependent Variable: quality

Number of Observations Read	1599
Number of Observations Used	1599

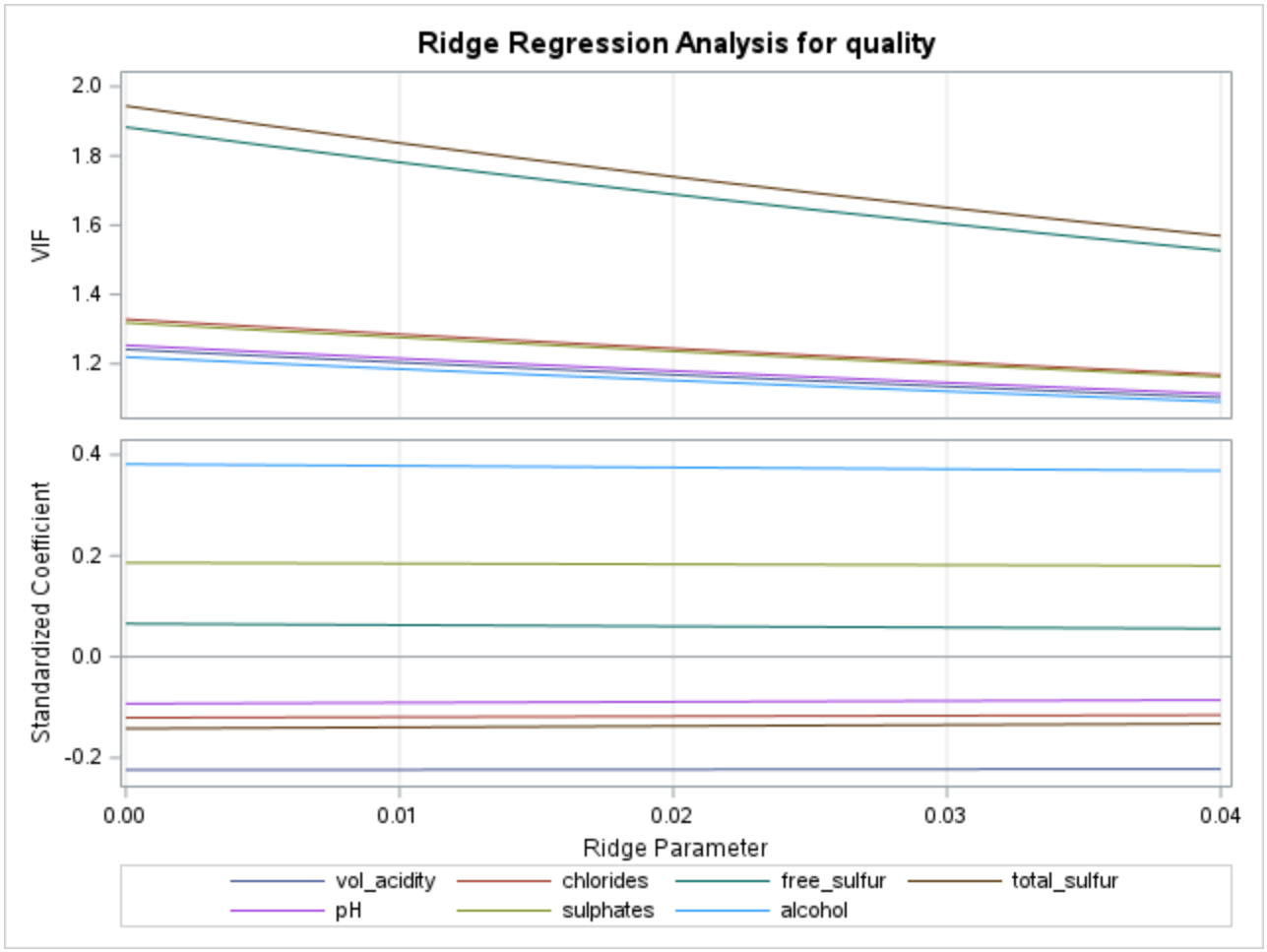
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	375.23126	53.60447	127.88	<.0001
Error	1591	666.93384	0.41919		
Corrected Total	1598	1042.16510			

Root MSE	0.64745	R-Square	0.3600
Dependent Mean	5.63602	Adj R-Sq	0.3572
Coeff Var	11.48771		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	4.44319	0.40261	11.04	<.0001
vol_acidity	1	-1.00664	0.10045	-10.02	<.0001
chlorides	1	-2.06652	0.39622	-5.22	<.0001
free_sulfur	1	0.00505	0.00212	2.38	0.0175
total_sulfur	1	-0.00349	0.00068647	-5.08	<.0001
pH	1	-0.48543	0.11746	-4.13	<.0001
sulphates	1	0.88709	0.10972	8.09	<.0001
alcohol	1	0.28894	0.01678	17.22	<.0001

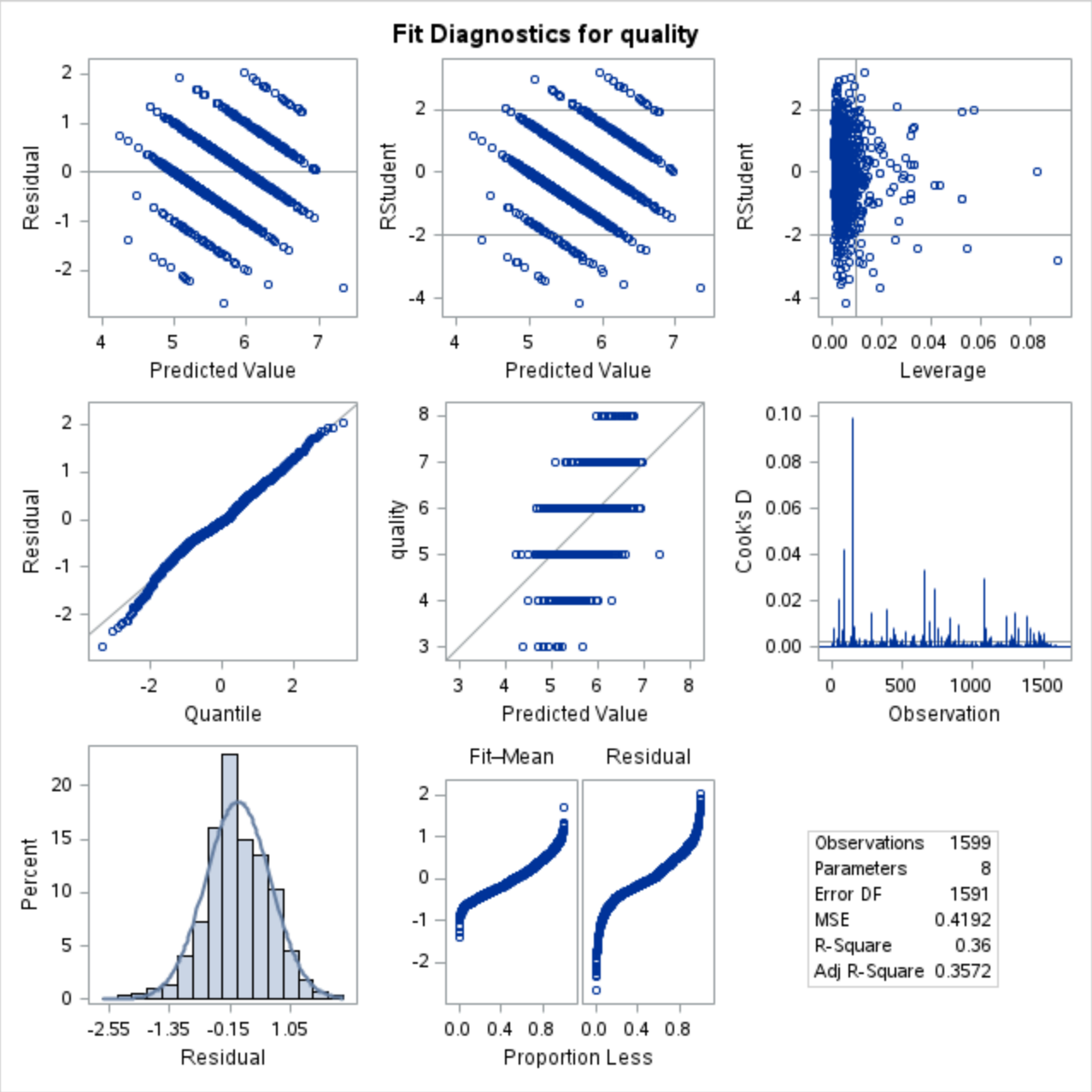
Ridge procedure

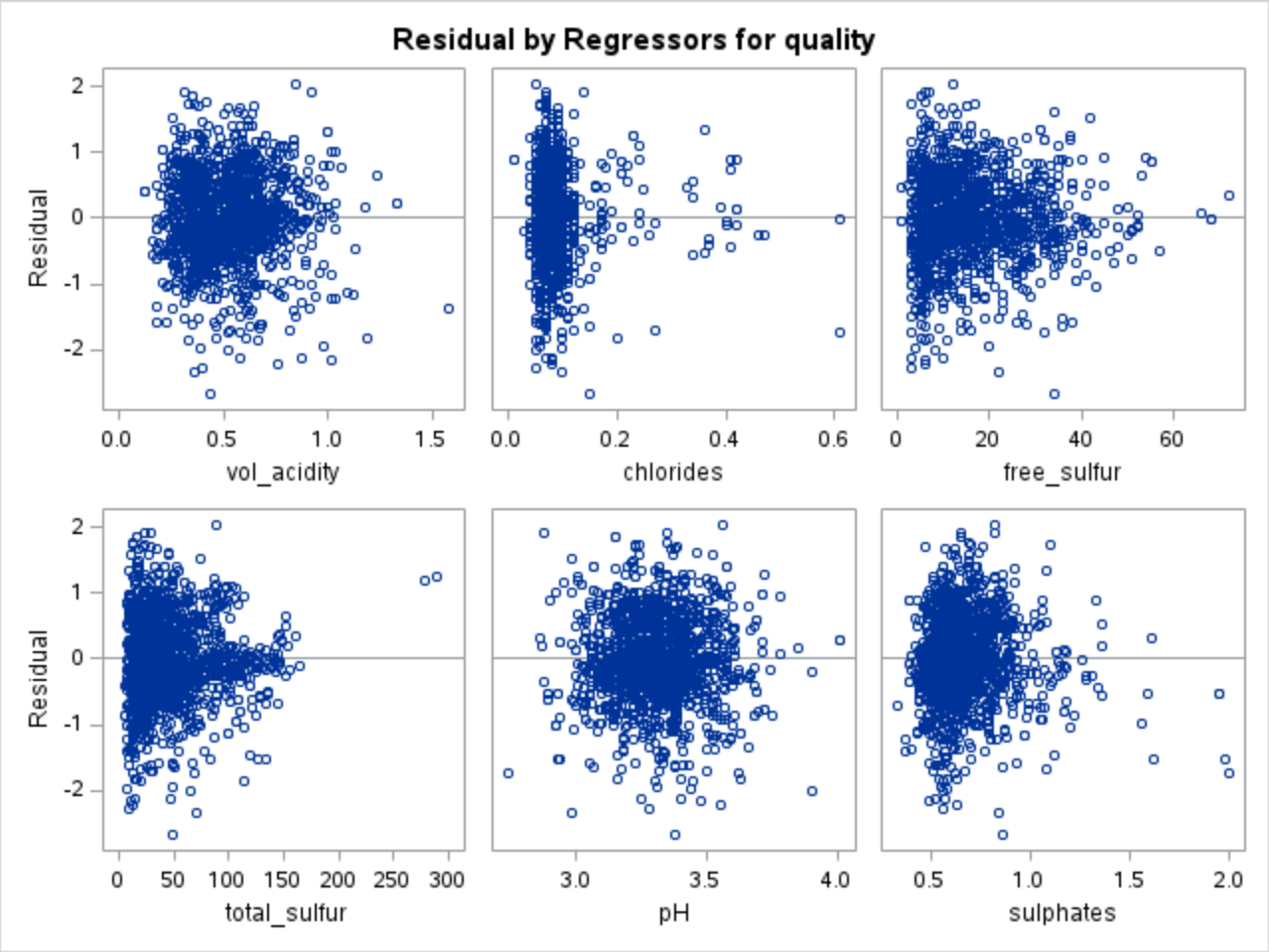
The REG Procedure
Model: MODEL1
Dependent Variable: quality

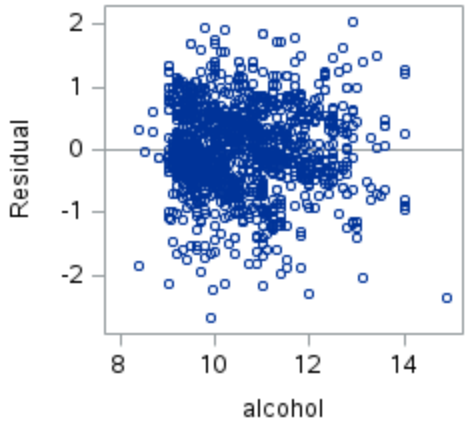


Ridge procedure

The REG Procedure
Model: MODEL1
Dependent Variable: quality


Fit Diagnostics for quality
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
quality
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 1599
Parameters 8
Error DF 1591
MSE 0.4192
R-Square 0.36
Adj R-Square 0.3572


Residual by Regressors for quality
Residual
vol_acidity
chlorides
free_sulfur
total_sulfur
pH
sulphates


Residual by Regressors for quality
Residual
2
1
0
-1
-2
8
10
12
14
alcohol