Exploratory Regression Analysis for Sale Price Prediction

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

Number of Observations Read	300
Number of Observations Used	300

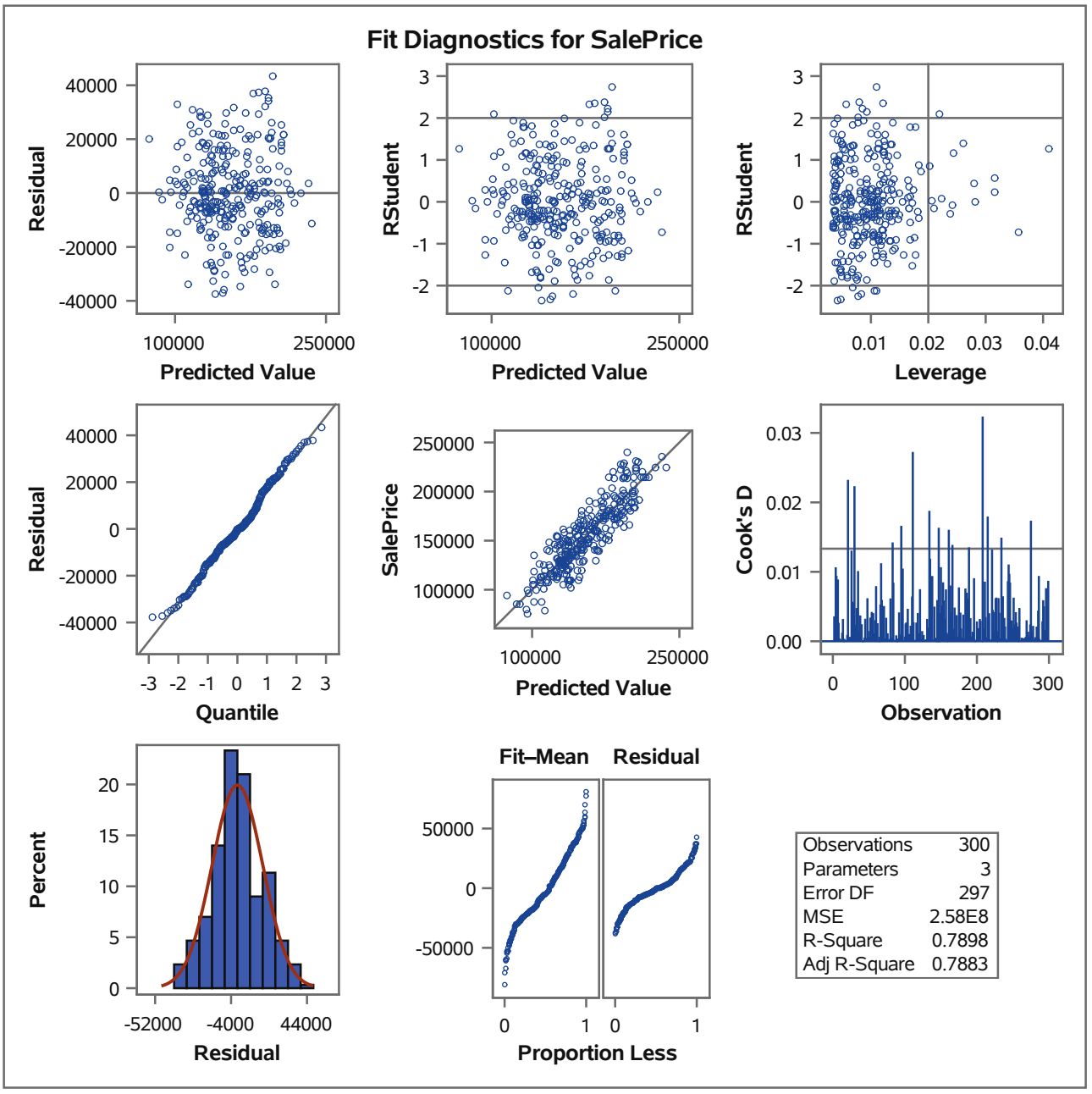
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.880157E11	1.440078E11	557.85	<.0001
Error	297	76670419313	258149560		
Corrected Total	299	3.646861E11			

Root MSE	16067	R-Square	0.7898
Dependent Mean	154910	Adj R-Sq	0.7883
Coeff Var	10.37185		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	103565	5211.59036	19.87	<.0001
Gr_Liv_Area	1	59.81176	3.20222	18.68	<.0001
Age_at_Sale	1	-671.54948	36.71159	-18.29	<.0001

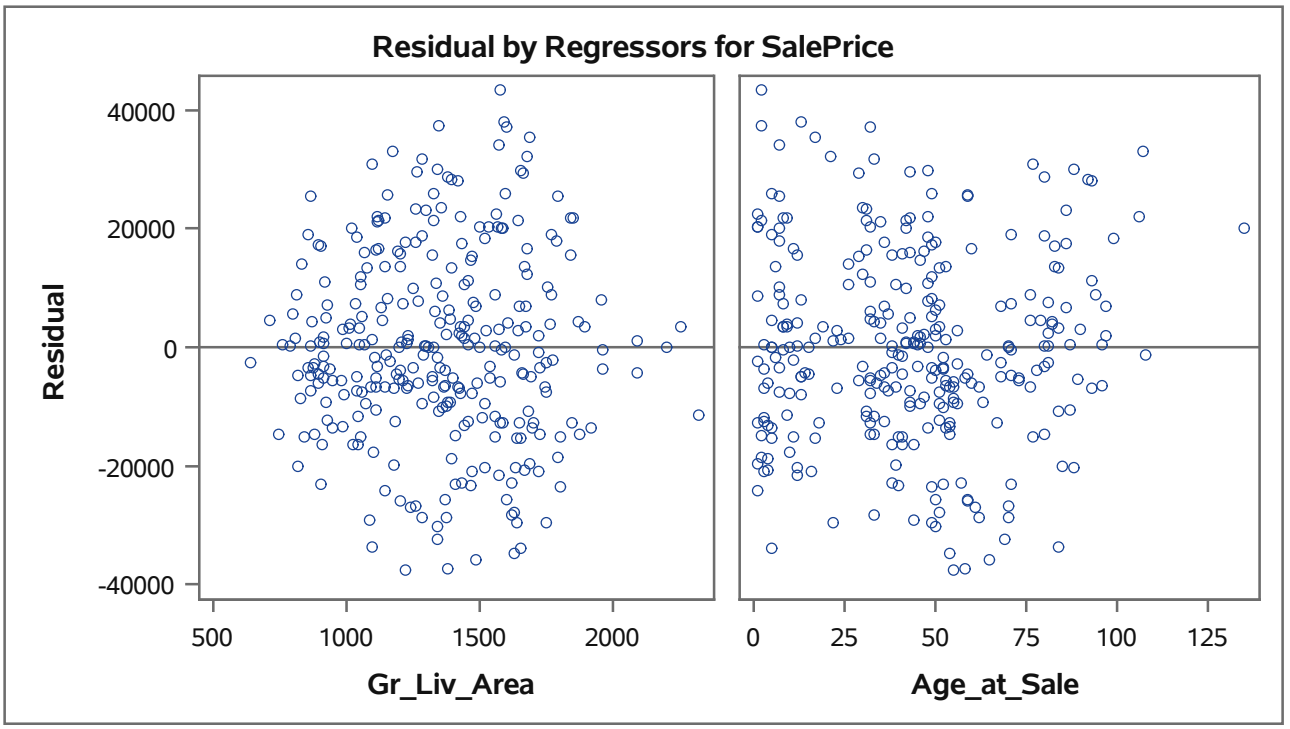
Exploratory Regression Analysis for Sale Price Prediction

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice



Exploratory Regression Analysis for Sale Price Prediction

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice



In-depth Diagnostic Analysis to Identify Influential Observations

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

Number of Observations Read	300
Number of Observations Used	300

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2.880157E11	1.440078E11	557.85	<.0001
Error	297	76670419313	258149560		
Corrected Total	299	3.646861E11			

Root MSE	16067	R-Square	0.7898
Dependent Mean	154910	Adj R-Sq	0.7883
Coeff Var	10.37185		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	103565	5211.59036	19.87	<.0001
Gr_Liv_Area	1	59.81176	3.20222	18.68	<.0001
Age_at_Sale	1	-671.54948	36.71159	-18.29	<.0001

In-depth Diagnostic Analysis to Identify Influential Observations

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

Output Statistics								
						DFBETAS		
Obs	Residual	RStudent	Hat Diag H	Cov Ratio	DFFITS	Intercept	Gr_Liv_Area	Age_at_Sale
1	4055	0.2530	0.0082	1.0179	0.0231	0.0015	0.0062	-0.0130
2	-15079	-0.9440	0.0119	1.0132	-0.1038	0.0289	-0.0601	0.0361
3	-15237	-0.9520	0.0079	1.0089	-0.0849	0.0105	-0.0372	0.0342
4	-29581	-1.8573	0.0093	0.9848	-0.1795	0.0678	-0.1170	0.0314
5	25379	1.5925	0.0111	0.9957	0.1686	0.1246	-0.1306	-0.0014
6	15500	0.9708	0.0127	1.0135	0.1102	-0.0376	0.0696	-0.0322
7	25893	1.6242	0.0101	0.9936	0.1638	0.0284	0.0267	-0.1107
8	-12830	-0.8030	0.0122	1.0160	-0.0892	0.0389	-0.0628	0.0152
9	8258	0.5145	0.0045	1.0121	0.0347	0.0193	-0.0167	-0.0006
10	-8432	-0.5251	0.0034	1.0108	-0.0307	-0.0041	-0.0002	-0.0040
11	-3463	-0.2165	0.0116	1.0215	-0.0234	-0.0194	0.0194	0.0038
12	2960	0.1852	0.0140	1.0241	0.0220	0.0020	-0.0056	0.0148
13	-8594	-0.5376	0.0125	1.0200	-0.0605	-0.0490	0.0500	0.0070
14	21919	1.3698	0.0051	0.9963	0.0983	0.0634	-0.0564	-0.0090
15	-91.6367	-0.005713	0.0066	1.0168	-0.0005	0.0000	0.0000	-0.0003
16	-6723	-0.4191	0.0059	1.0143	-0.0322	0.0127	-0.0131	-0.0204
17	-3312	-0.2073	0.0144	1.0245	-0.0250	0.0164	-0.0148	-0.0207
18	480.6103	0.0300	0.0121	1.0225	0.0033	-0.0000	-0.0005	0.0024
19	3499	0.2184	0.0089	1.0188	0.0207	-0.0139	0.0160	0.0095
20	-6821	-0.4271	0.0148	1.0234	-0.0523	0.0165	-0.0087	-0.0450
21	20086	1.2780	0.0410	1.0361	0.2643	-0.0781	0.0220	0.2412
22	-6726	-0.4191	0.0048	1.0132	-0.0290	-0.0136	0.0127	-0.0039
23	-5037	-0.3144	0.0092	1.0185	-0.0303	0.0039	-0.0135	0.0133
24	-6004	-0.3757	0.0132	1.0223	-0.0435	-0.0408	0.0369	0.0211
25	-3441	-0.2153	0.0130	1.0230	-0.0247	-0.0229	0.0212	0.0104
26	-35855	-2.2556	0.0077	0.9673	-0.1993	0.1083	-0.1086	-0.1380
27	18916	1.1853	0.0120	1.0080	0.1307	0.0742	-0.0864	0.0309
28	31738	1.9893	0.0042	0.9748	0.1295	0.0713	-0.0411	-0.0554
29	8829	0.5514	0.0093	1.0165	0.0533	0.0117	0.0062	-0.0365
30	37271	2.3517	0.0121	0.9674	0.2608	0.1620	-0.0850	-0.2222
31	-13247	-0.8284	0.0104	1.0137	-0.0848	-0.0393	0.0122	0.0681
32	3424	0.2144	0.0150	1.0251	0.0265	-0.0093	0.0170	-0.0082
33	13972	0.8773	0.0183	1.0210	0.1198	0.1157	-0.1035	-0.0697
34	3446	0.2147	0.0059	1.0157	0.0166	0.0056	-0.0004	-0.0103
35	37106	2.3332	0.0056	0.9618	0.1755	-0.0524	0.0975	-0.0130
36	15367	0.9584	0.0044	1.0052	0.0637	0.0061	0.0126	-0.0216
37	4368	0.2732	0.0129	1.0226	0.0313	-0.0203	0.0263	0.0047
38	21089	1.3184	0.0064	0.9990	0.1057	0.0855	-0.0695	-0.0479
39	4193	0.2610	0.0037	1.0132	0.0158	0.0054	-0.0015	-0.0048
40	-19953	-1.2459	0.0047	0.9992	-0.0858	-0.0586	0.0453	0.0277
41	276.2860	0.0173	0.0135	1.0240	0.0020	0.0019	-0.0017	-0.0009
42	-47.4351	-0.002962	0.0101	1.0204	-0.0003	-0.0001	-0.0000	0.0002
43	-1803	-0.1126	0.0106	1.0208	-0.0116	-0.0072	0.0038	0.0096
44	3543	0.2237	0.0315	1.0425	0.0404	-0.0256	0.0345	-0.0017
45	13590	0.8511	0.0132	1.0163	0.0986	0.0773	-0.0527	-0.0823
46	-5691	-0.3556	0.0107	1.0197	-0.0369	-0.0338	0.0294	0.0192
47	1778	0.1110	0.0103	1.0206	0.0113	0.0097	-0.0093	-0.0030

In-depth Diagnostic Analysis to Identify Influential Observations

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

Output Statistics								
						DFBETAS		
Obs	Residual	RStudent	Hat Diag H	Cov Ratio	DFFITS	Intercept	Gr_Liv_Area	Age_at_Sale
48	-28299	-1.7729	0.0059	0.9845	-0.1368	0.0484	-0.0820	0.0034
49	-15099	-0.9419	0.0050	1.0062	-0.0667	0.0251	-0.0382	-0.0108
50	-4396	-0.2765	0.0239	1.0341	-0.0432	0.0335	-0.0399	-0.0115
51	6035	0.3759	0.0040	1.0128	0.0239	0.0105	-0.0044	-0.0099
52	16588	1.0375	0.0094	1.0087	0.1012	-0.0074	0.0403	-0.0496
53	15502	0.9664	0.0035	1.0042	0.0576	0.0213	-0.0089	-0.0132
54	17369	1.0871	0.0106	1.0089	0.1126	0.0945	-0.0922	-0.0234
55	-10108	-0.6297	0.0038	1.0100	-0.0389	0.0037	-0.0073	-0.0136
56	-25897	-1.6200	0.0046	0.9884	-0.1106	-0.0229	0.0227	-0.0411
57	2711	0.1692	0.0091	1.0192	0.0163	-0.0110	0.0121	0.0089
58	13602	0.8482	0.0047	1.0076	0.0584	0.0287	-0.0264	0.0060
59	25851	1.6161	0.0035	0.9873	0.0956	0.0076	0.0037	0.0197
60	-27929	-1.7511	0.0078	0.9871	-0.1549	0.0969	-0.1133	-0.0706
61	-5126	-0.3194	0.0054	1.0146	-0.0235	-0.0105	0.0106	-0.0051
62	13368	0.8362	0.0110	1.0142	0.0882	0.0016	-0.0141	0.0612
63	-6114	-0.3808	0.0046	1.0133	-0.0259	-0.0002	0.0000	-0.0124
64	256.5044	0.0160	0.0110	1.0214	0.0017	-0.0011	0.0011	0.0013
65	-9336	-0.5821	0.0058	1.0126	-0.0444	0.0155	-0.0156	-0.0285
66	-28727	-1.7991	0.0049	0.9826	-0.1266	0.0097	-0.0087	-0.0693
67	18444	1.1629	0.0244	1.0213	0.1837	-0.1209	0.0999	0.1663
68	17538	1.0999	0.0146	1.0126	0.1337	-0.0747	0.0616	0.1160
69	-5733	-0.3577	0.0078	1.0168	-0.0317	0.0103	-0.0081	-0.0239
70	-10781	-0.6745	0.0121	1.0178	-0.0746	0.0331	-0.0252	-0.0635
71	17104	1.0718	0.0131	1.0118	0.1235	0.0389	-0.0564	0.0616
72	-5092	-0.3183	0.0116	1.0209	-0.0344	0.0221	-0.0209	-0.0267
73	-507.4285	-0.0317	0.0120	1.0224	-0.0035	0.0024	-0.0023	-0.0026
74	8813	0.5568	0.0316	1.0399	0.1006	-0.0803	0.0733	0.0842
75	14762	0.9204	0.0041	1.0056	0.0589	-0.0152	0.0245	0.0145
76	-10910	-0.6809	0.0072	1.0128	-0.0581	0.0247	-0.0389	0.0011
77	869.0722	0.0543	0.0114	1.0218	0.0058	0.0052	-0.0049	-0.0020
78	-6482	-0.4037	0.0040	1.0125	-0.0254	-0.0072	0.0057	-0.0055
79	-6765	-0.4216	0.0056	1.0140	-0.0316	-0.0174	0.0170	-0.0031
80	-26800	-1.6786	0.0066	0.9884	-0.1365	0.0201	-0.0114	-0.0921
81	-5039	-0.3155	0.0150	1.0245	-0.0389	-0.0351	0.0277	0.0294
82	-2165	-0.1353	0.0112	1.0214	-0.0144	0.0033	-0.0077	0.0055
83	34052	2.1421	0.0093	0.9737	0.2079	0.0402	0.0296	-0.1398
84	21754	1.3651	0.0134	1.0048	0.1593	-0.0453	0.0933	-0.0578
85	3376	0.2108	0.0090	1.0189	0.0201	0.0093	-0.0029	-0.0156
86	-3187	-0.1994	0.0136	1.0236	-0.0234	-0.0220	0.0195	0.0127
87	-3540	-0.2212	0.0111	1.0210	-0.0234	0.0022	-0.0098	0.0118
88	7315	0.4575	0.0121	1.0204	0.0507	0.0392	-0.0264	-0.0417
89	74.8708	0.004675	0.0098	1.0202	0.0005	0.0002	-0.0000	-0.0004
90	-4692	-0.2935	0.0132	1.0228	-0.0340	-0.0206	0.0238	-0.0067
91	-7867	-0.4900	0.0039	1.0117	-0.0308	-0.0052	-0.0032	0.0094
92	-25766	-1.6119	0.0048	0.9888	-0.1120	0.0273	-0.0306	-0.0615
93	-5332	-0.3335	0.0128	1.0221	-0.0379	0.0092	-0.0038	-0.0313
94	7488	0.4686	0.0133	1.0215	0.0544	-0.0324	0.0284	0.0456

In-depth Diagnostic Analysis to Identify Influential Observations

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

Output Statistics								
						DFBETAS		
Obs	Residual	RStudent	Hat Diag H	Cov Ratio	DFFITS	Intercept	Gr_Liv_Area	Age_at_Sale
95	30104	1.8949	0.0138	0.9879	0.2243	-0.1022	0.0756	0.1954
96	25653	1.6049	0.0050	0.9892	0.1141	0.0381	-0.0388	0.0344
97	32054	2.0131	0.0078	0.9774	0.1781	-0.0432	0.0959	-0.0499
98	-483.7044	-0.0303	0.0173	1.0279	-0.0040	0.0017	-0.0028	0.0010
99	3178	0.1983	0.0081	1.0180	0.0179	0.0152	-0.0137	-0.0061
100	5572	0.3492	0.0166	1.0260	0.0454	0.0430	-0.0403	-0.0199
101	16362	1.0221	0.0073	1.0069	0.0875	0.0734	-0.0588	-0.0470
102	20199	1.2617	0.0051	0.9991	0.0903	-0.0200	0.0439	-0.0105
103	-1316	-0.0820	0.0064	1.0166	-0.0066	0.0032	-0.0045	-0.0012
104	-20359	-1.2739	0.0086	1.0023	-0.1186	0.0004	-0.0393	0.0622
105	1023	0.0643	0.0224	1.0333	0.0097	-0.0065	0.0085	0.0006
106	10584	0.6605	0.0072	1.0130	0.0562	0.0468	-0.0407	-0.0211
107	-7395	-0.4628	0.0137	1.0220	-0.0546	-0.0509	0.0471	0.0238
108	-12637	-0.7902	0.0107	1.0146	-0.0821	-0.0368	0.0104	0.0660
109	-5999	-0.3747	0.0102	1.0191	-0.0380	-0.0145	0.0021	0.0295
110	-11404	-0.7222	0.0357	1.0420	-0.1389	0.0919	-0.1212	0.0019
111	43395	2.7455	0.0110	0.9472	0.2891	0.0687	0.0285	-0.2097
112	-13648	-0.8538	0.0111	1.0140	-0.0906	0.0014	-0.0313	0.0515
113	-2395	-0.1501	0.0166	1.0270	-0.0195	-0.0158	0.0111	0.0167
114	-4272	-0.2666	0.0085	1.0181	-0.0246	0.0019	-0.0098	0.0114
115	1364	0.0850	0.0065	1.0167	0.0069	0.0050	-0.0033	-0.0045
116	-23268	-1.4537	0.0038	0.9926	-0.0901	0.0115	-0.0309	-0.0030
117	4986	0.3114	0.0103	1.0197	0.0318	0.0279	-0.0261	-0.0102
118	29550	1.8499	0.0036	0.9794	0.1109	0.0468	-0.0292	-0.0120
119	11859	0.7398	0.0063	1.0109	0.0587	0.0420	-0.0391	-0.0068
120	-3544	-0.2206	0.0037	1.0134	-0.0134	-0.0042	0.0029	-0.0014
121	-23075	-1.4465	0.0107	0.9997	-0.1503	-0.0768	0.0909	-0.0433
122	1354	0.0843	0.0054	1.0156	0.0062	0.0036	-0.0034	0.0003
123	-9412	-0.5862	0.0035	1.0102	-0.0345	-0.0103	0.0056	-0.0010
124	17590	1.0971	0.0036	1.0016	0.0664	0.0176	-0.0114	0.0101
125	2908	0.1812	0.0062	1.0161	0.0143	-0.0076	0.0093	0.0060
126	13426	0.8368	0.0039	1.0069	0.0522	-0.0084	0.0139	0.0181
127	-1677	-0.1045	0.0053	1.0154	-0.0076	-0.0045	0.0042	-0.0002
128	-2712	-0.1694	0.0106	1.0207	-0.0175	-0.0134	0.0137	0.0011
129	7768	0.4837	0.0035	1.0114	0.0289	0.0084	-0.0051	0.0026
130	-3285	-0.2047	0.0052	1.0151	-0.0149	-0.0103	0.0089	0.0027
131	11303	0.7096	0.0188	1.0243	0.0982	-0.0587	0.0477	0.0878
132	16619	1.0373	0.0054	1.0047	0.0767	0.0290	-0.0304	0.0222
133	-12322	-0.7700	0.0094	1.0136	-0.0748	-0.0597	0.0587	0.0110
134	28095	1.7707	0.0178	0.9965	0.2382	-0.1330	0.1047	0.2134
135	28738	1.8053	0.0109	0.9883	0.1896	-0.0885	0.0717	0.1576
136	-1295	-0.0815	0.0242	1.0351	-0.0128	0.0059	-0.0039	-0.0119
137	6995	0.4378	0.0137	1.0222	0.0516	-0.0383	0.0386	0.0362
138	-32496	-2.0402	0.0068	0.9754	-0.1688	0.0538	-0.0463	-0.1206
139	3913	0.2445	0.0110	1.0208	0.0258	0.0042	-0.0077	0.0155
140	4541	0.2835	0.0091	1.0186	0.0272	-0.0005	-0.0027	0.0187
141	13527	0.8502	0.0203	1.0236	0.1223	-0.0920	0.0855	0.0995

In-depth Diagnostic Analysis to Identify Influential Observations

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

Output Statistics								
						DFBETAS		
Obs	Residual	RStudent	Hat Diag H	Cov Ratio	DFFITS	Intercept	Gr_Liv_Area	Age_at_Sale
142	506.3910	0.0318	0.0206	1.0314	0.0046	0.0014	-0.0022	0.0024
143	-7393	-0.4611	0.0070	1.0151	-0.0387	-0.0313	0.0280	0.0110
144	541.0015	0.0337	0.0039	1.0141	0.0021	0.0011	-0.0008	-0.0004
145	-25746	-1.6123	0.0068	0.9908	-0.1337	0.0775	-0.0929	-0.0574
146	276.3760	0.0173	0.0091	1.0194	0.0017	0.0011	-0.0007	-0.0013
147	-33709	-2.1219	0.0109	0.9761	-0.2227	0.0030	0.0281	-0.1582
148	-77.8699	-0.004908	0.0281	1.0394	-0.0008	0.0006	-0.0007	-0.0000
149	21369	1.3363	0.0068	0.9989	0.1104	-0.0595	0.0787	0.0274
150	25453	1.5983	0.0124	0.9969	0.1794	-0.0362	0.0923	-0.0772
151	17812	1.1159	0.0123	1.0100	0.1245	-0.0240	0.0631	-0.0544
152	-11591	-0.7226	0.0049	1.0098	-0.0509	0.0113	-0.0245	0.0048
153	21707	1.3623	0.0136	1.0051	0.1598	-0.0502	0.0976	-0.0533
154	18945	1.1873	0.0124	1.0084	0.1330	-0.0181	0.0607	-0.0651
155	-15299	-0.9571	0.0104	1.0114	-0.0983	-0.0086	-0.0244	0.0619
156	3971	0.2482	0.0114	1.0212	0.0266	-0.0050	0.0134	-0.0114
157	22397	1.4042	0.0113	1.0015	0.1499	0.0408	0.0094	-0.1120
158	8703	0.5444	0.0124	1.0198	0.0609	0.0367	-0.0185	-0.0520
159	363.4895	0.0227	0.0107	1.0211	0.0024	0.0011	-0.0003	-0.0019
160	-12527	-0.7811	0.0051	1.0091	-0.0557	-0.0400	0.0303	0.0227
161	-33856	-2.1310	0.0106	0.9754	-0.2207	-0.0127	-0.0611	0.1352
162	-5192	-0.3233	0.0039	1.0130	-0.0202	-0.0052	-0.0003	0.0069
163	-28738	-1.8021	0.0074	0.9849	-0.1558	0.0610	-0.0540	-0.1151
164	-3958	-0.2471	0.0087	1.0184	-0.0232	0.0031	-0.0006	-0.0170
165	21383	1.3374	0.0071	0.9992	0.1130	0.0939	-0.0747	-0.0607
166	35329	2.2228	0.0085	0.9694	0.2054	-0.0388	0.1021	-0.0740
167	-13396	-0.8365	0.0076	1.0107	-0.0732	-0.0518	0.0514	0.0023
168	-2570	-0.1611	0.0167	1.0270	-0.0210	0.0165	-0.0167	-0.0143
169	-21531	-1.3473	0.0080	0.9998	-0.1208	-0.0159	-0.0243	0.0725
170	-7773	-0.4852	0.0082	1.0161	-0.0442	-0.0164	0.0020	0.0322
171	-4489	-0.2803	0.0100	1.0196	-0.0282	-0.0225	0.0158	0.0215
172	-20863	-1.3044	0.0066	0.9996	-0.1064	-0.0325	-0.0021	0.0683
173	10666	0.6648	0.0047	1.0104	0.0455	0.0111	0.0027	-0.0212
174	1433	0.0893	0.0048	1.0149	0.0062	0.0008	0.0011	-0.0026
175	29383	1.8425	0.0069	0.9829	0.1532	-0.0551	0.0950	-0.0141
176	-7018	-0.4379	0.0077	1.0161	-0.0387	-0.0309	0.0224	0.0259
177	-22941	-1.4347	0.0060	0.9954	-0.1116	0.0494	-0.0728	-0.0137
178	17640	1.1008	0.0045	1.0024	0.0742	0.0482	-0.0341	-0.0286
179	6850	0.4266	0.0040	1.0124	0.0271	-0.0025	0.0093	-0.0024
180	-6627	-0.4138	0.0092	1.0178	-0.0398	0.0245	-0.0316	-0.0089
181	-14771	-0.9253	0.0133	1.0149	-0.1073	0.0704	-0.0907	-0.0167
182	-6721	-0.4190	0.0064	1.0148	-0.0336	-0.0271	0.0223	0.0145
183	658.0936	0.0411	0.0103	1.0206	0.0042	0.0036	-0.0034	-0.0011
184	21467	1.3464	0.0125	1.0043	0.1512	0.0979	-0.0541	-0.1293
185	-3722	-0.2334	0.0181	1.0282	-0.0317	0.0113	-0.0205	0.0104
186	-20927	-1.3120	0.0121	1.0049	-0.1450	0.0043	-0.0522	0.0828
187	-18757	-1.1745	0.0107	1.0070	-0.1224	-0.0668	0.0290	0.1011
188	20355	1.2754	0.0112	1.0050	0.1359	0.0443	0.0009	-0.1047

In-depth Diagnostic Analysis to Identify Influential Observations

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

Output Statistics								
						DFBETAS		
Obs	Residual	RStudent	Hat Diag H	Cov Ratio	DFFITS	Intercept	Gr_Liv_Area	Age_at_Sale
189	-24259	-1.5264	0.0172	1.0040	-0.2019	-0.1664	0.1190	0.1722
190	-12815	-0.8002	0.0077	1.0114	-0.0703	0.0330	-0.0493	-0.0017
191	23270	1.4545	0.0047	0.9935	0.1002	0.0626	-0.0393	-0.0497
192	-5208	-0.3253	0.0100	1.0193	-0.0327	-0.0272	0.0264	0.0065
193	-9554	-0.5957	0.0058	1.0124	-0.0455	-0.0297	0.0279	0.0018
194	15694	0.9788	0.0043	1.0047	0.0642	0.0396	-0.0299	-0.0157
195	-9870	-0.6147	0.0034	1.0097	-0.0357	-0.0029	-0.0037	-0.0012
196	29860	1.8736	0.0078	0.9827	0.1657	-0.1027	0.1237	0.0655
197	48.9336	0.003046	0.0034	1.0137	0.0002	0.0000	0.0000	0.0000
198	5179	0.3229	0.0062	1.0154	0.0255	0.0181	-0.0169	-0.0029
199	1926	0.1203	0.0102	1.0204	0.0122	-0.0085	0.0098	0.0054
200	-23039	-1.4395	0.0041	0.9934	-0.0927	0.0217	-0.0307	-0.0366
201	7178	0.4483	0.0094	1.0176	0.0436	0.0348	-0.0342	-0.0064
202	-12812	-0.8004	0.0088	1.0125	-0.0753	0.0500	-0.0564	-0.0387
203	-9396	-0.5869	0.0093	1.0161	-0.0569	-0.0426	0.0431	0.0032
204	-14656	-0.9171	0.0113	1.0130	-0.0980	0.0715	-0.0796	-0.0502
205	18465	1.1537	0.0066	1.0033	0.0940	0.0699	-0.0650	-0.0144
206	2137	0.1330	0.0035	1.0135	0.0079	-0.0002	0.0013	0.0015
207	142.6816	0.008910	0.0099	1.0203	0.0009	-0.0003	0.0002	0.0007
208	33072	2.0931	0.0219	0.9883	0.3134	-0.1035	0.0482	0.2809
209	1887	0.1182	0.0168	1.0273	0.0155	-0.0054	0.0030	0.0136
210	6986	0.4404	0.0280	1.0372	0.0748	-0.0554	0.0486	0.0655
211	-37275	-2.3430	0.0047	0.9605	-0.1617	0.0426	-0.0489	-0.0865
212	-22867	-1.4294	0.0051	0.9946	-0.1025	0.0382	-0.0437	-0.0554
213	-4971	-0.3099	0.0064	1.0157	-0.0248	0.0066	-0.0055	-0.0171
214	-6790	-0.4240	0.0093	1.0177	-0.0410	0.0175	-0.0144	-0.0327
215	28295	1.7825	0.0168	0.9950	0.2330	-0.1245	0.0966	0.2078
216	-10591	-0.6625	0.0119	1.0178	-0.0727	0.0057	0.0050	-0.0548
217	-15098	-0.9458	0.0134	1.0146	-0.1101	-0.0540	0.0670	-0.0366
218	-4503	-0.2815	0.0117	1.0213	-0.0307	-0.0277	0.0259	0.0112
219	-1580	-0.0987	0.0111	1.0214	-0.0104	-0.0094	0.0087	0.0038
220	2847	0.1774	0.0055	1.0154	0.0131	0.0010	0.0032	-0.0057
221	-34795	-2.1885	0.0083	0.9707	-0.2003	0.1298	-0.1466	-0.1030
222	-26987	-1.6889	0.0048	0.9862	-0.1168	-0.0066	0.0075	-0.0557
223	-30136	-1.8871	0.0036	0.9781	-0.1129	-0.0022	-0.0102	-0.0290
224	1503	0.0937	0.0064	1.0166	0.0075	0.0027	-0.0003	-0.0049
225	8053	0.5048	0.0166	1.0245	0.0655	-0.0317	0.0488	-0.0109
226	20388	1.2775	0.0113	1.0050	0.1364	0.0526	-0.0078	-0.1083
227	-18584	-1.1654	0.0137	1.0103	-0.1375	0.0187	-0.0629	0.0695
228	-83.5229	-0.005215	0.0095	1.0199	-0.0005	-0.0003	0.0002	0.0004
229	-8049	-0.5046	0.0168	1.0248	-0.0660	-0.0609	0.0494	0.0490
230	-20645	-1.2936	0.0110	1.0043	-0.1367	-0.0066	-0.0391	0.0838
231	-14650	-0.9182	0.0144	1.0162	-0.1109	-0.1050	0.0947	0.0568
232	-4738	-0.2966	0.0142	1.0238	-0.0356	-0.0335	0.0307	0.0166
233	4527	0.2827	0.0099	1.0195	0.0283	0.0122	-0.0031	-0.0223
234	37945	2.3898	0.0079	0.9615	0.2132	0.0157	0.0548	-0.1194
235	-7003	-0.4377	0.0109	1.0193	-0.0459	-0.0232	0.0087	0.0377

In-depth Diagnostic Analysis to Identify Influential Observations

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

Output Statistics								
						DFBETAS		
Obs	Residual	RStudent	Hat Diag H	Cov Ratio	DFFITS	Intercept	Gr_Liv_Area	Age_at_Sale
236	-29092	-1.8231	0.0059	0.9826	-0.1399	-0.1044	0.0917	0.0326
237	-11691	-0.7303	0.0090	1.0138	-0.0694	-0.0616	0.0517	0.0374
238	-14937	-0.9348	0.0114	1.0128	-0.1004	-0.0534	0.0222	0.0838
239	-13675	-0.8544	0.0087	1.0115	-0.0799	-0.0606	0.0602	0.0069
240	-5675	-0.3542	0.0087	1.0177	-0.0331	-0.0251	0.0249	0.0029
241	138.7959	0.008692	0.0156	1.0262	0.0011	0.0005	-0.0007	0.0004
242	2278	0.1424	0.0121	1.0223	0.0158	-0.0084	0.0070	0.0133
243	23052	1.4463	0.0123	1.0014	0.1614	-0.0615	0.0420	0.1373
244	30971	1.9452	0.0088	0.9810	0.1829	0.0160	-0.0370	0.1140
245	-20203	-1.2701	0.0178	1.0118	-0.1708	0.1106	-0.0952	-0.1484
246	-20090	-1.2616	0.0157	1.0099	-0.1595	-0.0633	0.0866	-0.0697
247	11017	0.6895	0.0128	1.0184	0.0787	0.0737	-0.0657	-0.0405
248	23477	1.4671	0.0042	0.9926	0.0951	0.0392	-0.0134	-0.0428
249	12337	0.7700	0.0071	1.0113	0.0651	-0.0259	0.0422	-0.0034
250	-11807	-0.7382	0.0105	1.0153	-0.0761	-0.0270	0.0019	0.0586
251	-19736	-1.2370	0.0122	1.0069	-0.1374	-0.0075	-0.0385	0.0870
252	-12795	-0.8004	0.0113	1.0152	-0.0858	-0.0201	-0.0087	0.0626
253	-5582	-0.3479	0.0057	1.0147	-0.0264	-0.0193	0.0135	0.0148
254	-16415	-1.0278	0.0118	1.0113	-0.1121	-0.1027	0.0942	0.0469
255	-16404	-1.0250	0.0077	1.0072	-0.0900	-0.0755	0.0675	0.0305
256	-15165	-0.9471	0.0071	1.0082	-0.0801	-0.0663	0.0580	0.0284
257	352.1441	0.0220	0.0066	1.0169	0.0018	0.0014	-0.0013	-0.0004
258	9815	0.6114	0.0037	1.0101	0.0373	0.0180	-0.0119	-0.0060
259	-14621	-0.9175	0.0168	1.0187	-0.1199	-0.0647	0.0798	-0.0352
260	1944	0.1210	0.0037	1.0138	0.0074	-0.0011	0.0024	0.0013
261	-3628	-0.2265	0.0091	1.0189	-0.0217	-0.0169	0.0167	0.0026
262	10761	0.6703	0.0034	1.0091	0.0394	0.0032	0.0019	0.0070
263	-3930	-0.2447	0.0037	1.0133	-0.0148	0.0011	-0.0028	-0.0043
264	-5834	-0.3638	0.0072	1.0161	-0.0309	0.0183	-0.0207	-0.0164
265	-7477	-0.4662	0.0061	1.0142	-0.0366	-0.0249	0.0235	0.0020
266	6233	0.3881	0.0037	1.0124	0.0238	-0.0028	0.0055	0.0073
267	4627	0.2901	0.0174	1.0272	0.0386	0.0240	-0.0283	0.0077
268	6601	0.4126	0.0115	1.0201	0.0445	-0.0044	-0.0019	0.0338
269	21767	1.3600	0.0049	0.9963	0.0954	0.0649	-0.0538	-0.0213
270	790.1475	0.0492	0.0040	1.0142	0.0031	0.0017	-0.0013	-0.0004
271	16082	1.0030	0.0041	1.0040	0.0643	0.0331	-0.0265	-0.0028
272	-9432	-0.5882	0.0062	1.0130	-0.0466	0.0244	-0.0276	-0.0254
273	730.9946	0.0456	0.0079	1.0182	0.0041	0.0034	-0.0031	-0.0011
274	-16520	-1.0318	0.0068	1.0062	-0.0853	-0.0675	0.0608	0.0219
275	22108	1.3965	0.0261	1.0170	0.2286	-0.1347	0.1026	0.2124
276	8846	0.5538	0.0140	1.0213	0.0660	0.0352	-0.0427	0.0190
277	-6415	-0.4024	0.0184	1.0274	-0.0551	0.0283	-0.0210	-0.0498
278	-12695	-0.7938	0.0104	1.0143	-0.0815	0.0540	-0.0540	-0.0578
279	-4471	-0.2793	0.0105	1.0201	-0.0288	0.0204	-0.0219	-0.0171
280	3162	0.1976	0.0112	1.0213	0.0211	0.0015	-0.0045	0.0140
281	7389	0.4612	0.0082	1.0163	0.0418	0.0135	-0.0173	0.0183
282	-9348	-0.5822	0.0034	1.0101	-0.0340	-0.0019	-0.0044	-0.0015

In-depth Diagnostic Analysis to Identify Influential Observations

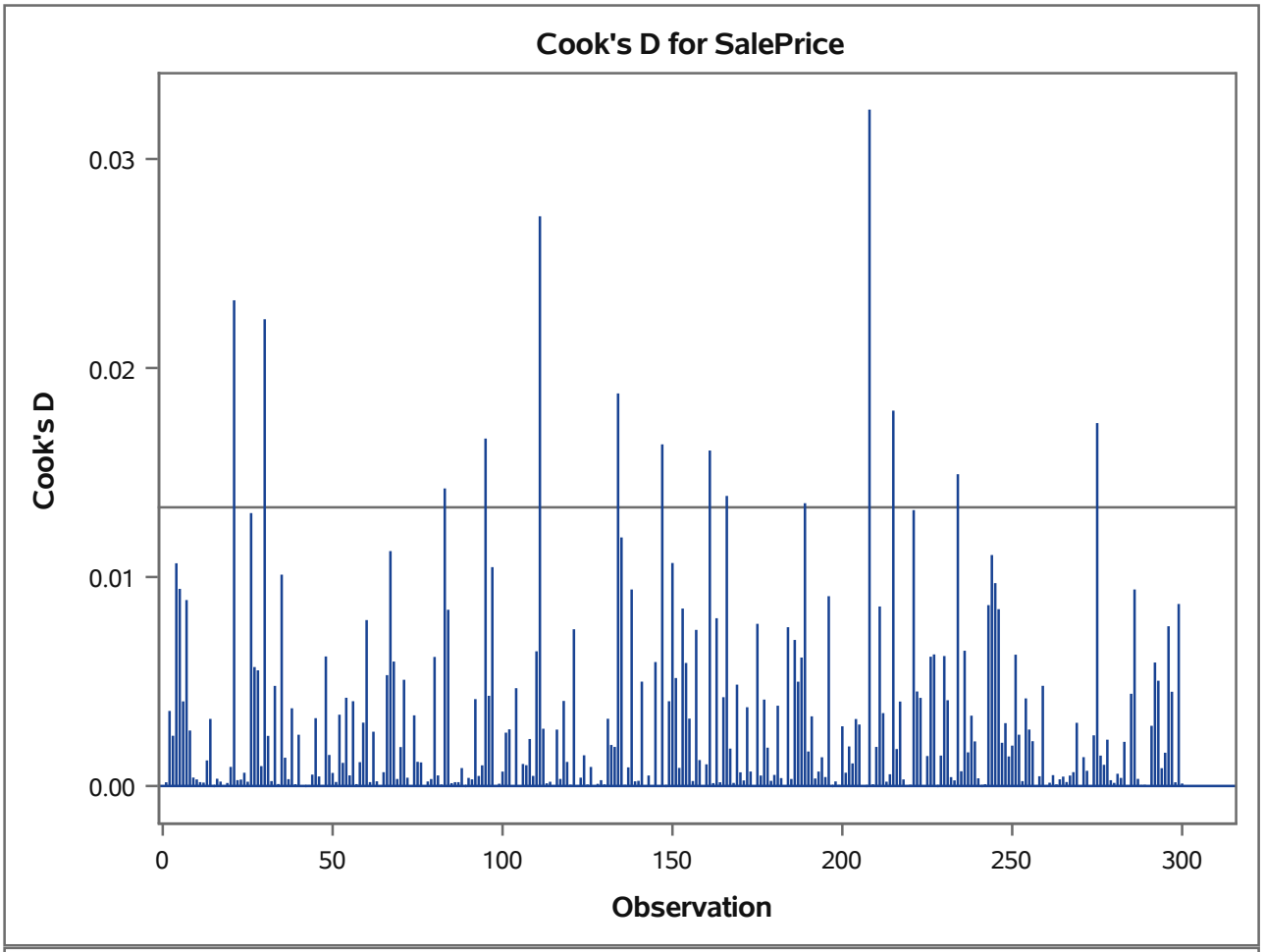
The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

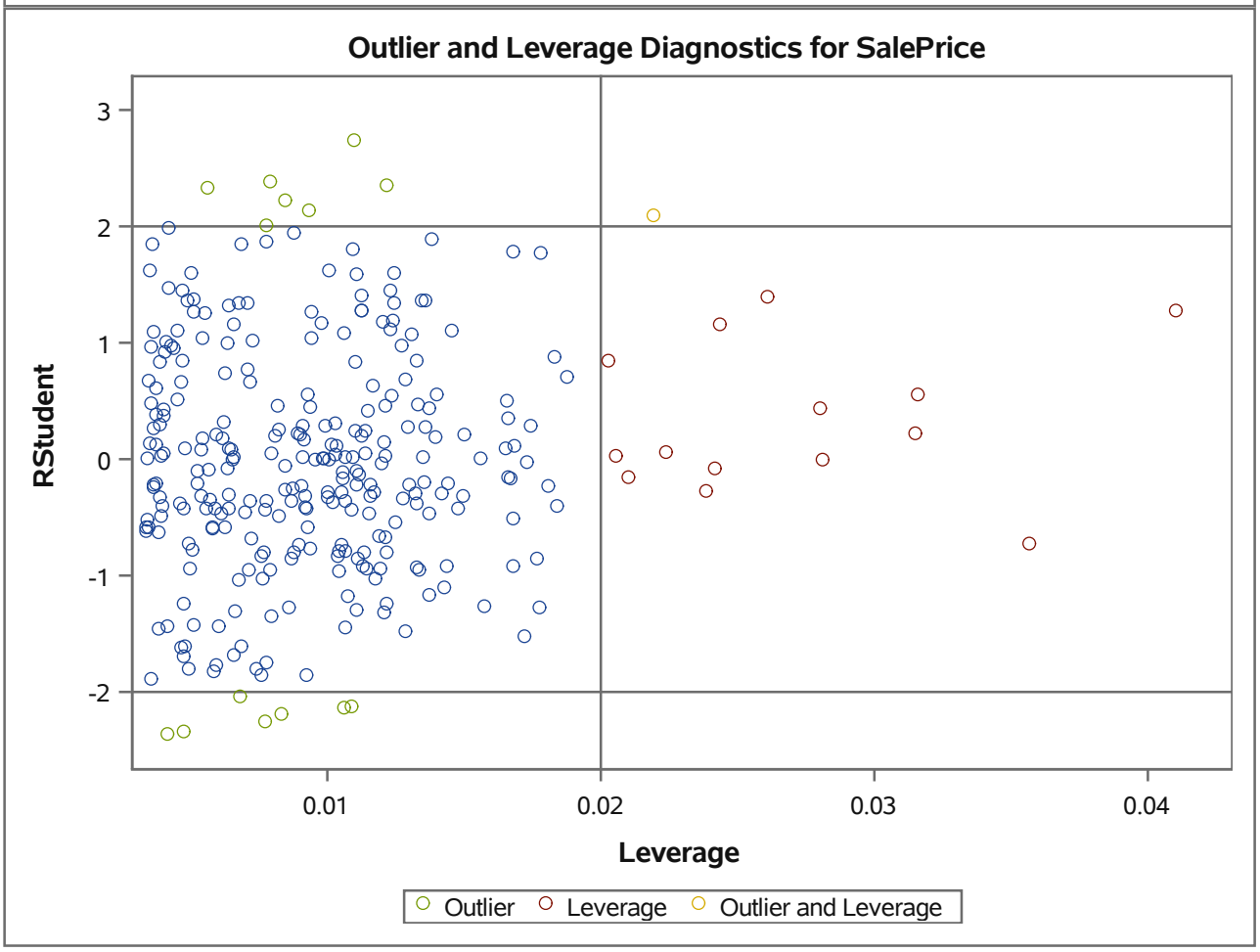
Output Statistics								
						DFBETAS		
Obs	Residual	RStudent	Hat Diag H	Cov Ratio	DFFITS	Intercept	Gr_Liv_Area	Age_at_Sale
283	15932	0.9948	0.0064	1.0065	0.0796	0.0622	-0.0549	-0.0216
284	-982.3965	-0.0613	0.0084	1.0187	-0.0057	0.0033	-0.0044	-0.0011
285	-13669	-0.8580	0.0176	1.0207	-0.1150	0.0909	-0.1032	-0.0481
286	-23500	-1.4750	0.0128	1.0011	-0.1683	0.1254	-0.1437	-0.0724
287	4346	0.2719	0.0136	1.0233	0.0319	0.0119	-0.0163	0.0143
288	1491	0.0934	0.0165	1.0270	0.0121	0.0115	-0.0107	-0.0056
289	-3391	-0.2111	0.0038	1.0135	-0.0130	0.0008	-0.0019	-0.0044
290	-1370	-0.0853	0.0057	1.0158	-0.0064	-0.0014	0.0017	-0.0028
291	20018	1.2505	0.0055	0.9998	0.0930	-0.0413	0.0583	0.0197
292	-17643	-1.1064	0.0143	1.0122	-0.1332	-0.1151	0.0868	0.1054
293	20155	1.2616	0.0094	1.0035	0.1230	0.0201	0.0212	-0.0808
294	-7475	-0.4673	0.0115	1.0197	-0.0505	0.0068	-0.0230	0.0241
295	10166	0.6358	0.0116	1.0179	0.0690	-0.0099	0.0320	-0.0325
296	-37600	-2.3631	0.0042	0.9591	-0.1526	-0.0393	0.0334	-0.0414
297	18701	1.1704	0.0098	1.0061	0.1164	-0.0368	0.0247	0.0936
298	-2509	-0.1576	0.0210	1.0316	-0.0231	-0.0141	0.0170	-0.0051
299	-29631	-1.8589	0.0076	0.9830	-0.1623	0.0997	-0.1192	-0.0673
300	4846	0.3017	0.0039	1.0132	0.0189	0.0053	-0.0002	-0.0067

Sum of Residuals	0
Sum of Squared Residuals	76670419313
Predicted Residual SS (PRESS)	78117012085

In-depth Diagnostic Analysis to Identify Influential Observations

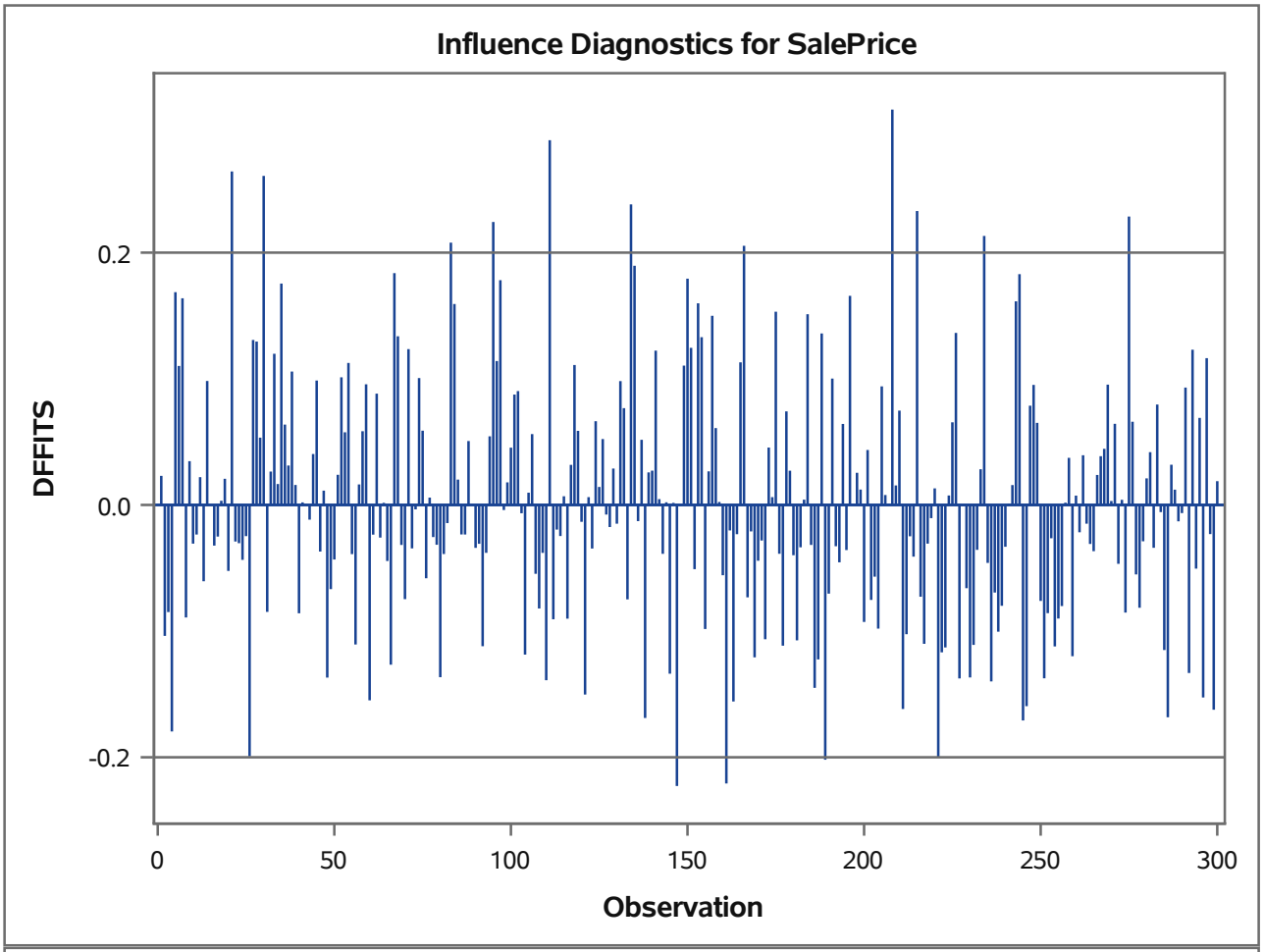
The REG Procedure
Model: MODEL1

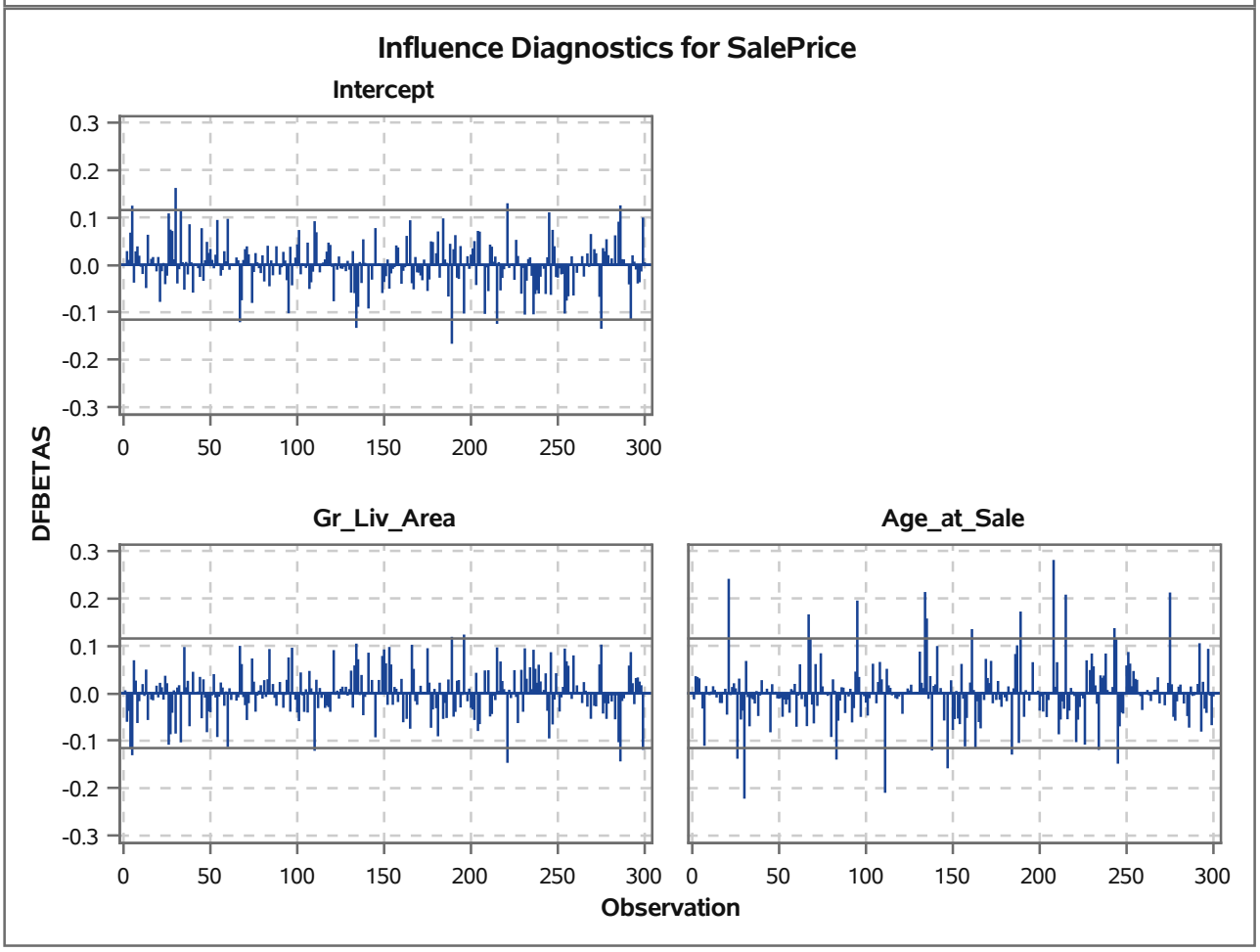




In-depth Diagnostic Analysis to Identify Influential Observations

The REG Procedure
Model: MODEL1





Obs	SalePrice	Gr_Liv_Area	Age_at_Sale	leverage	rstudent	cooksd	dffits	flag
1	130000	1630	54	0.008304	-2.18847	0.013199	-0.20026	1
2	147000	1143	1	0.017198	-1.52639	0.013530	-0.20192	2
3	228500	1689	17	0.008466	2.22282	0.013878	0.20539	2
4	227000	1573	7	0.009332	2.14214	0.014236	0.20790	2
5	228000	1592	13	0.007898	2.38975	0.014918	0.21322	2
6	165400	1656	5	0.010616	-2.13102	0.016051	-0.22074	2
7	79000	1096	84	0.010899	-2.12194	0.016345	-0.22274	2
8	154900	1343	88	0.013815	1.89493	0.016622	0.22428	2
9	139900	1428	106	0.026097	1.39652	0.017364	0.22860	2
10	153575	1396	92	0.016793	1.78254	0.017959	0.23296	2
11	153900	1416	93	0.017778	1.77072	0.018782	0.23822	2
12	220000	1346	2	0.012149	2.35169	0.022331	0.26080	2
13	94000	1020	135	0.041024	1.27795	0.023239	0.26432	2
14	240000	1578	2	0.010966	2.74553	0.027258	0.28909	2
15	135000	1174	107	0.021922	2.09310	0.032362	0.31336	2

Kolmogorov-Smirnov Test of Normality for Living Area

The UNIVARIATE Procedure
Variable: Gr_Liv_Area

Moments			
N	300	Sum Weights	300
Mean	1343.29	Sum Observations	402987
Std Deviation	314.747974	Variance	99066.2869
Skewness	0.18000407	Kurtosis	-0.3677799
Uncorrected SS	570949227	Corrected SS	29620819.8
Coeff Variation	23.4311261	Std Error Mean	18.1719827

Basic Statistical Measures			
Location		Variability	
Mean	1343.290	Std Deviation	314.74797
Median	1349.000	Variance	99066
Mode	864.000	Range	1681
		Interquartile Range	480.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	73.92094	Pr > |t|	<.0001
Sign	M	150	Pr >= |M|	<.0001
Signed Rank	S	22575	Pr >= |S|	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.986948	Pr < W	0.0082
Kolmogorov-Smirnov	D	0.043753	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.113856	Pr > W-Sq	0.0772
Anderson-Darling	A-Sq	0.890976	Pr > A-Sq	0.0231

Quantiles (Definition 5)	
Level	Quantile
100% Max	2322.0
99%	2146.5
95%	1839.5
90%	1735.5
75% Q3	1582.0
50% Median	1349.0
25% Q1	1102.0
10%	910.5
5%	861.0
1%	753.0
0% Min	641.0

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
641	298	2090	50
713	267	2093	105
747	259	2200	148
759	142	2256	44
789	241	2322	110

Independent Samples t-Test for Living Area by Sale Condition

The TTEST Procedure

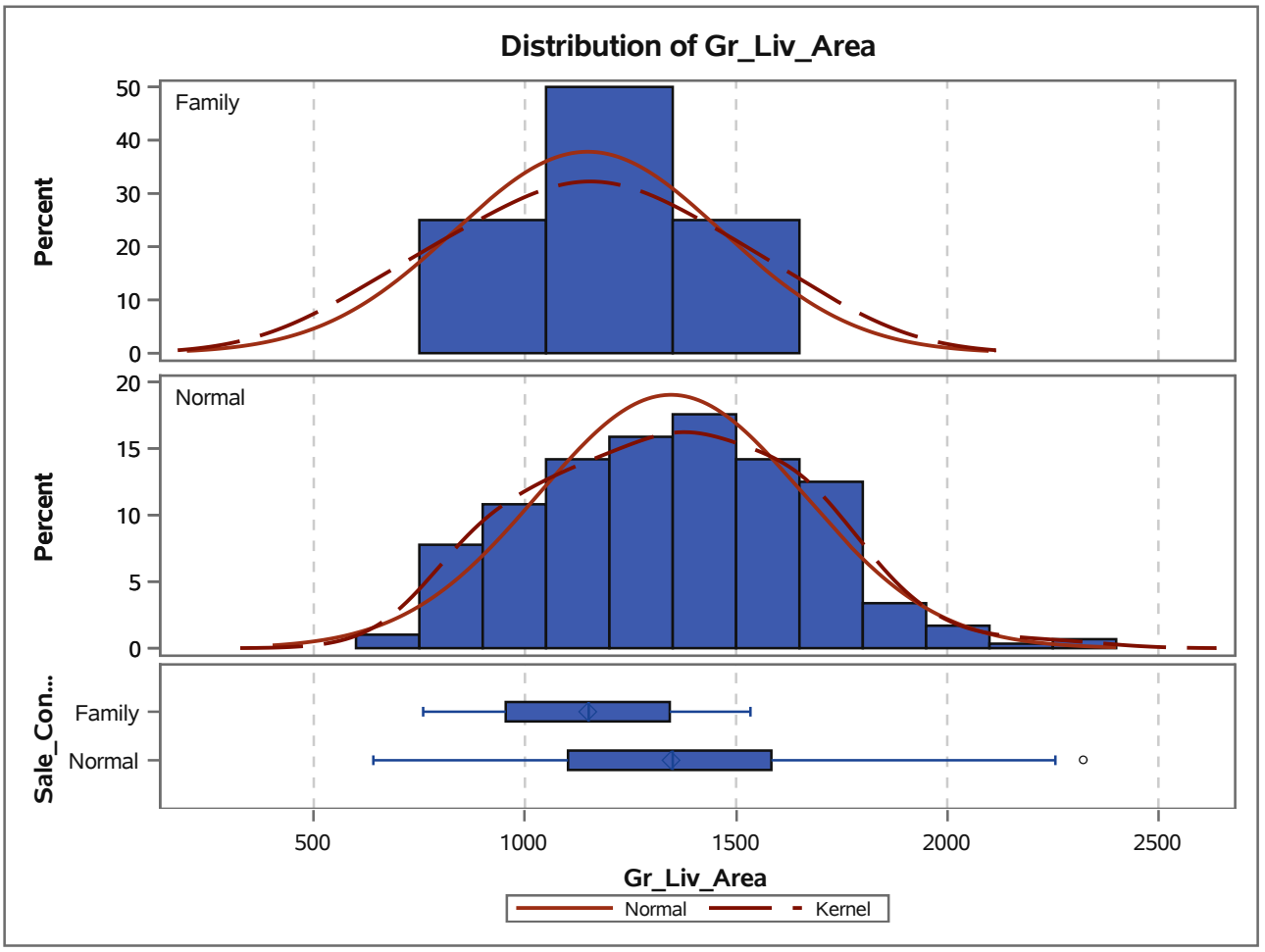
Variable: Gr_Liv_Area

Sale_Condition	Method	N	Mean	Std Dev	Std Err	Minimum	Maximum
Family		4	1148.8	316.4	158.2	759.0	1534.0
Normal		296	1345.9	314.4	18.2763	641.0	2322.0
Diff (1-2)	Pooled		-197.2	314.5	158.3		
Diff (1-2)	Satterthwaite		-197.2		159.3		

Sale_Condition	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
Family		1148.8	645.3	1652.2	316.4	179.2	1179.7
Normal		1345.9	1310.0	1381.9	314.4	291.0	342.0
Diff (1-2)	Pooled	-197.2	-508.7	114.3	314.5	291.1	341.9
Diff (1-2)	Satterthwaite	-197.2	-696.6	302.2			

Method	Variances	DF	t Value	Pr > |t|
Pooled	Equal	298	-1.25	0.2139
Satterthwaite	Unequal	3.0806	-1.24	0.3017

Equality of Variances				
Method	Num DF	Den DF	F Value	Pr > F
Folded F	3	295	1.01	0.7749



Independent Samples t-Test for Living Area by Sale Condition

The TTEST Procedure

Variable: Gr_Liv_Area