

Regression Analysis with Standardized Collinearity Diagnostics

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	6	3.063744E11	51062396999	256.57	<.0001
Error	293	58311700187	199016042		
Corrected Total	299	3.646861E11			

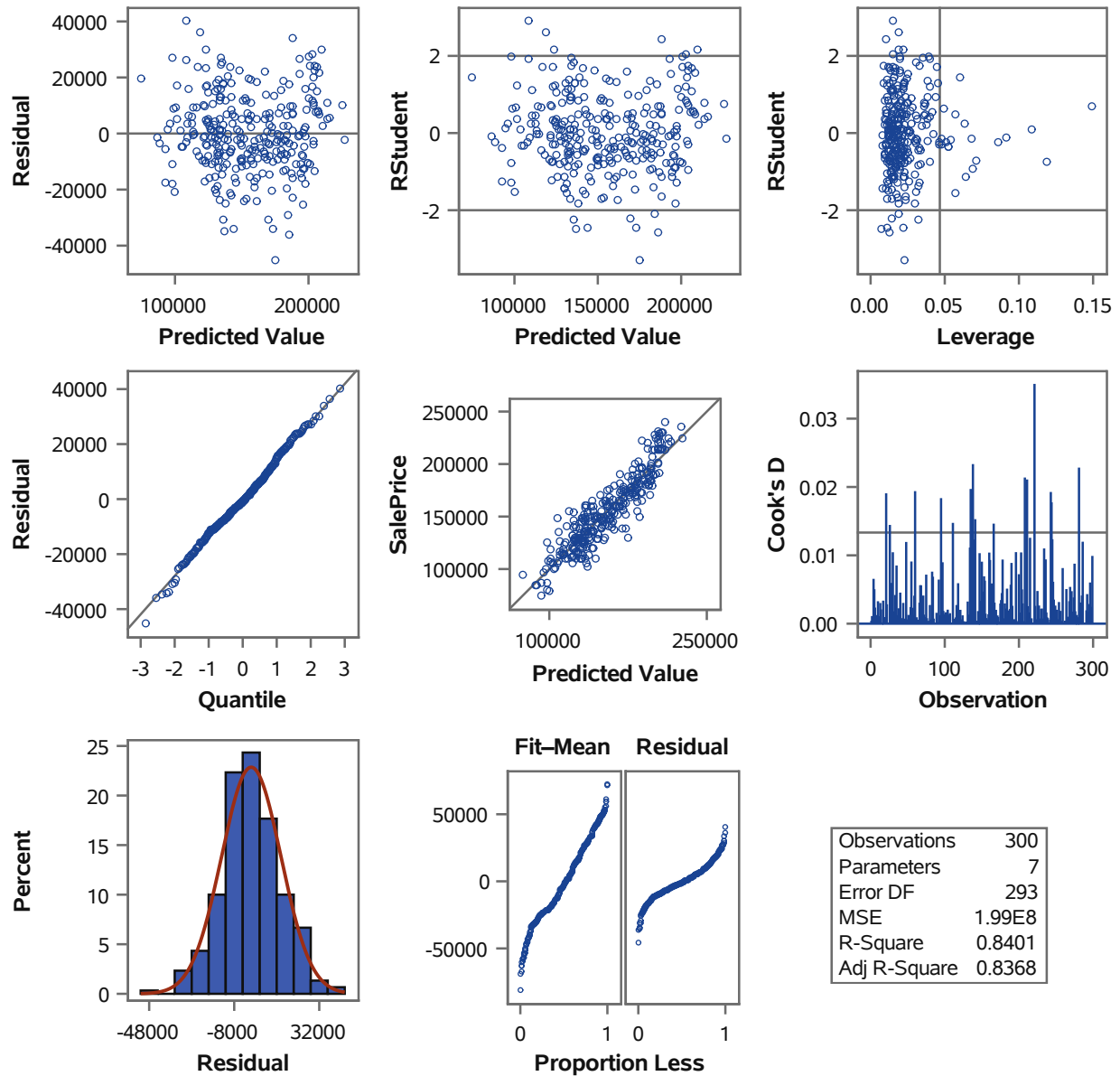
Root MSE	14107	R-Square	0.8401
Dependent Mean	154910	Adj R-Sq	0.8368
Coeff Var	9.10677		

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Squared Semi-partial Corr Type II
Intercept	1	74697	5766.25317	12.95	<.0001	.
Gr_Liv_Area	1	51.43011	3.45007	14.91	<.0001	0.12127
fullbath_2plus	1	6005.85200	2500.87545	2.40	0.0170	0.00315
Total_Bsmt_SF	1	21.13561	2.96919	7.12	<.0001	0.02765
Age_at_Sale	1	-513.50416	39.35261	-13.05	<.0001	0.09292
Open_Porch_SF	1	-5.25951	15.13243	-0.35	0.7284	0.00006592
Garage_Area	1	24.87604	6.08830	4.09	<.0001	0.00911

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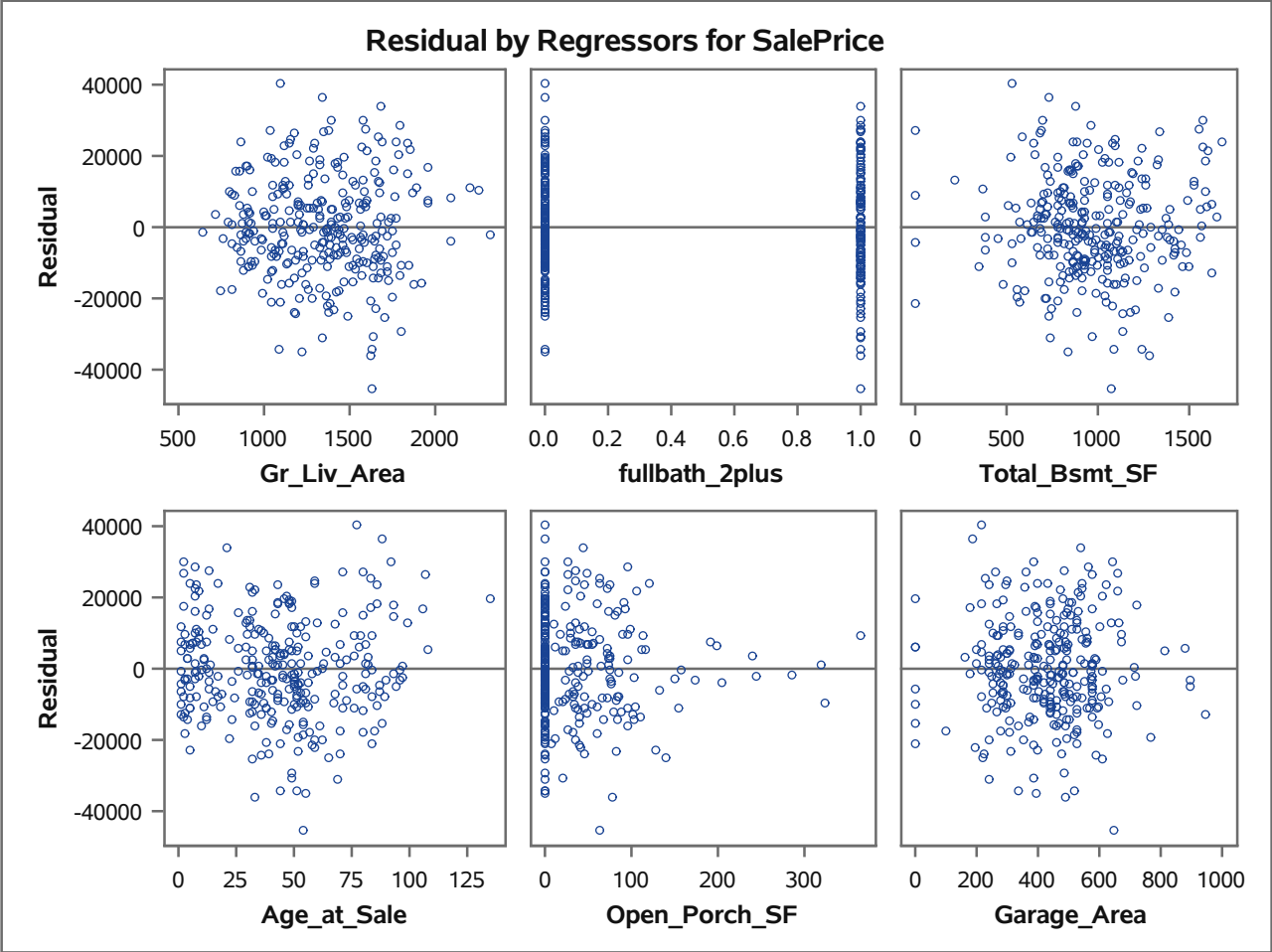
Fit Diagnostics for SalePrice



The REG Procedure

Model: MODEL1

Dependent Variable: SalePrice



Detailed Collinearity Diagnostics on Key Housing Factors

The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice

Number of Observations Read	1984
Number of Observations Used	1984

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	7.805256E12	2.601752E12	1858.65	<.0001
Error	1980	2.771612E12	1399804222		
Corrected Total	1983	1.057687E13			

Root MSE	37414	R-Square	0.7380
Dependent Mean	178010	Adj R-Sq	0.7376
Coeff Var	21.01788		

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variance Inflation
Intercept	1	-33899	2964.72543	-11.43	<.0001	0
Gr_Liv_Area	1	87.37253	1.86583	46.83	<.0001	1.22651
Total_Bsmt_SF	1	72.53245	2.30960	31.40	<.0001	1.20832
Lot_Area	1	0.63128	0.11182	5.65	<.0001	1.08777

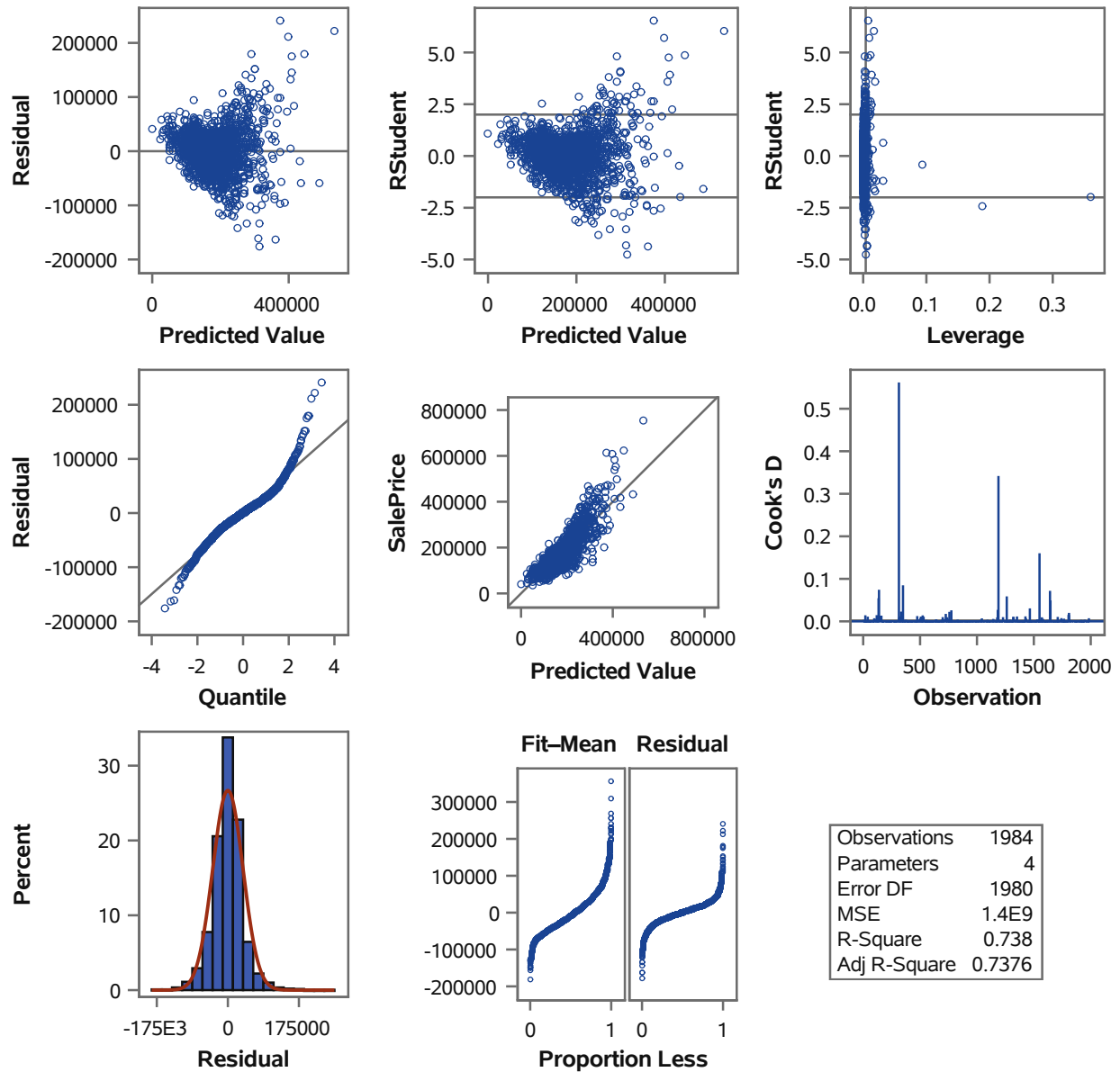
Collinearity Diagnostics						
Number	Eigenvalue	Condition Index	Proportion of Variation			
			Intercept	Gr_Liv_Area	Total_Bsmt_SF	Lot_Area
1	3.62389	1.00000	0.00577	0.00590	0.00765	0.01929
2	0.24987	3.80828	0.02449	0.02071	0.03620	0.97762
3	0.07476	6.96241	0.14287	0.23071	0.94887	0.00184
4	0.05148	8.39016	0.82687	0.74267	0.00728	0.00124

Collinearity Diagnostics (intercept adjusted)					
Number	Eigenvalue	Condition Index	Proportion of Variation		
			Gr_Liv_Area	Total_Bsmt_SF	Lot_Area
1	1.58617	1.00000	0.19869	0.19203	0.14223
2	0.81123	1.39831	0.08285	0.17310	0.84753
3	0.60261	1.62240	0.71845	0.63487	0.01024

Detailed Collinearity Diagnostics on Key Housing Factors

The REG Procedure
 Model: MODEL1
 Dependent Variable: SalePrice

Fit Diagnostics for SalePrice



The REG Procedure
Model: MODEL1
Dependent Variable: SalePrice



The REG Procedure

Model: MODEL1

Dependent Variable: SalePrice

Number of Observations Read	300
Number of Observations Used	300

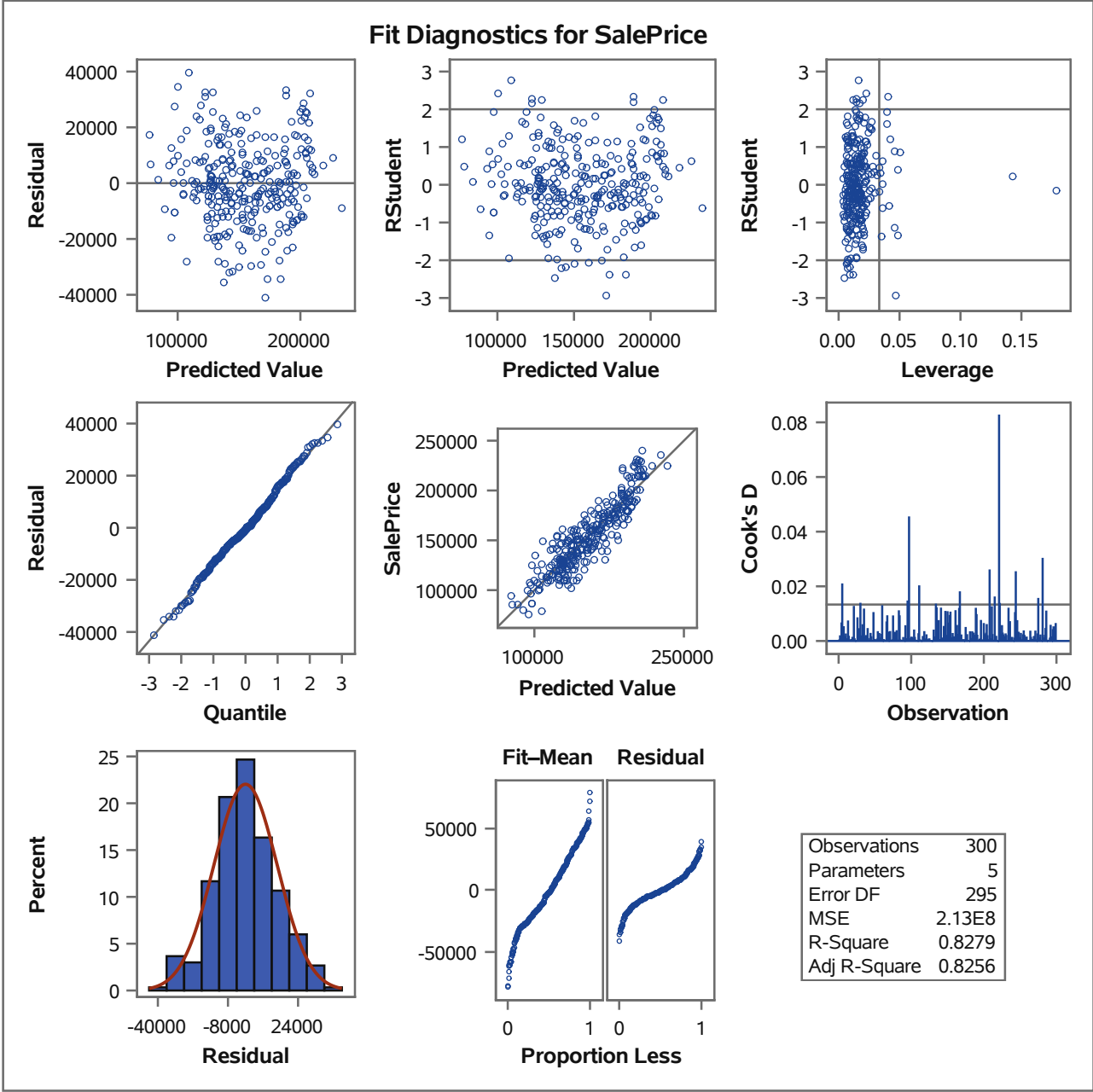
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.019248E11	75481192199	354.79	<.0001
Error	295	62761313387	212750215		
Corrected Total	299	3.646861E11			

Root MSE	14586	R-Square	0.8279
Dependent Mean	154910	Adj R-Sq	0.8256
Coeff Var	9.41576		

Parameter Estimates						
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Variance Inflation
Intercept	1	77779	5785.70319	13.44	<.0001	0
Gr_Liv_Area	1	57.55856	2.94407	19.55	<.0001	1.20677
Total_Bsmt_SF	1	23.29239	3.05811	7.62	<.0001	1.16517
Lot_Area	1	0.28425	0.23598	1.20	0.2293	1.12938
Age_at_Sale	1	-590.53302	34.89945	-16.92	<.0001	1.29021

Collinearity Diagnostics (intercept adjusted)						
Number	Eigenvalue	Condition Index	Proportion of Variation			
			Gr_Liv_Area	Total_Bsmt_SF	Lot_Area	Age_at_Sale
1	1.82419	1.00000	0.11374	0.10814	0.10129	0.13217
2	0.84073	1.47301	0.38476	0.27045	0.27026	0.08120
3	0.75940	1.54989	0.04891	0.41296	0.60782	0.06989
4	0.57568	1.78010	0.45258	0.20845	0.02063	0.71673

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Comprehensive Collinearity Assessment for Selected Variables

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