

The SAS System

The MEANS Procedure

Analysis Variable : SalePrice		
Neighborhood	N Obs	Mean
Blmngtn	17	194870.88
Blueste	2	137500.00
BrDale	16	104493.75
BrkSide	58	124834.05
ClearCr	28	212565.43
CollgCr	150	197965.77
Crawfor	51	210624.73
Edwards	100	128219.70
Gilbert	79	192854.51
IDOTRR	37	100123.78
MeadowV	17	98576.47
Mitchel	49	156270.12
NAmes	225	145847.08
NPkVill	9	142694.44
NWAmes	73	189050.07
NoRidge	41	335295.32
NridgHt	77	316270.62
OldTown	113	128225.30
SWISU	25	142591.36
Sawyer	74	136793.14
SawyerW	59	186555.80
Somerst	86	225379.84
StoneBr	25	310499.00
Timber	38	242247.45
Veenker	11	238772.73

The SAS System

The MEANS Procedure

Analysis Variable : SalePrice		
GarageCars	N Obs	Mean
0	81	103317.28
1	369	128116.69
2	824	183851.66
3	181	309636.12
4	5	192655.80

The SAS System

The MEANS Procedure

Analysis Variable : SalePrice		
Fireplaces	N Obs	Mean
0	690	141331.48
1	650	211843.91
2	115	240588.54
3	5	252000.00

The SAS System

The MEANS Procedure

Analysis Variable : SalePrice		
KitchenQual	N Obs	Mean
Ex	100	328554.67
Fa	39	105565.21
Gd	586	212116.02
TA	735	139962.51

The SAS System

The MEANS Procedure

Analysis Variable : SalePrice		
OverallQual	N Obs	Mean
1	2	50150.00
2	3	51770.33
3	20	87473.75
4	116	108420.66
5	397	133523.35
6	374	161603.03
7	319	207716.42
8	168	274735.54
9	43	367513.02
10	18	438588.39

The SAS System

The MEANS Procedure

Analysis Variable : SalePrice		
TotalBath	N Obs	Mean
1	228	110869.67
1.5	129	142692.37
2	456	158116.10
2.5	295	199723.98
3	186	230525.67
3.5	144	273512.90
4	13	319118.77
4.5	7	386107.14
5	1	145900.00
6	1	179000.00

The SAS System

The MEANS Procedure

Analysis Variable : SalePrice		
HouseAge	N Obs	Mean
0	64	264302.23
1	100	266914.00
2	39	223247.85
3	36	253159.72
4	41	199063.41
5	30	235136.67
6	30	223234.53
7	24	223333.33
8	25	211244.00
9	23	228317.39
10	22	203306.82
11	22	271389.00
12	16	224025.00
13	15	240080.00
14	14	241342.86
15	20	245925.00
16	12	202541.67
17	11	209872.73
18	8	207285.00
19	7	218342.86
20	5	229800.00
21	6	220500.00
22	7	183357.14
23	3	172166.67
24	5	134400.00
25	7	206357.14
26	7	178928.57
27	5	144672.00
28	5	205100.00

29	14	170000.00
30	19	155890.11
31	31	168832.42
32	23	168526.09
33	15	157976.67
34	15	148943.33
35	11	136909.09
36	20	136722.50
37	25	145324.00
38	16	164087.50
39	24	129198.29
40	15	166261.33
41	17	145920.59
42	22	148945.45
43	19	158776.32
44	16	165264.56
45	17	137105.88
46	15	151850.00
47	23	143402.17
48	18	154608.33
49	21	148032.48
50	16	166432.75
51	24	149118.04
52	15	127676.67
53	20	134325.00
54	17	156294.12
55	9	125266.67
56	10	125030.00
57	12	123275.92
58	13	135430.23
59	16	124118.75
60	11	125247.73
61	5	127060.00
62	7	140857.14
63	2	137500.00

	2	91450.00
65	6	104166.67
66	6	125916.67
67	7	141014.29
68	12	122125.00
69	12	147270.83
70	12	143697.58
71	3	91933.33
72	3	121466.67
73	9	176955.56
74	3	186900.00
75	2	267500.00
76	4	121500.00
77	7	140247.71
78	7	119985.71
79	1	120000.00
80	5	92480.00
81	13	120423.08
82	5	112940.00
83	12	132166.67
84	13	128542.31
85	5	122796.00
86	9	144177.78
87	11	108936.36
88	12	140316.67
89	14	126696.43
90	6	128400.00
91	6	131566.67
92	4	138365.50
93	7	161200.00
94	6	107308.33
95	3	124800.00
96	6	107317.33
97	7	124700.00
98	3	106500.00

	4	100100.00
100	3	154000.00
102	1	135000.00
103	1	163000.00
104	1	157500.00
106	3	108666.67
107	1	90000.00
108	3	123716.67
109	1	95000.00
110	2	121388.00
111	1	106000.00
114	1	475000.00
115	1	325000.00
117	2	133500.00
119	1	124900.00
122	1	100000.00
125	1	122500.00
126	1	124000.00
127	2	142750.00
128	1	295000.00
129	1	265979.00
135	1	94000.00
136	1	122000.00

The SAS System

Obs	Id	SalePrice	Neighborhood	OverallQual	GarageCars	GrLivArea	HouseAge
739	739	179000	Edwards	5	0	1200	22
922	922	145900	Edwards	5	0	2200	108

The SAS System

Obs	Id	SalePrice	Neighborhood	OverallQual	GarageCars	GrLivArea	HouseAge
12	12	345000	NridgHt	9	3	2324	1
119	119	320000	SawyerW	7	3	3222	20
314	314	375000	Timber	7	2	2036	44
336	336	228950	Timber	5	2	1786	43
421	421	206300	Mitchel	7	4	1344	11
455	455	188000	Mitchel	5	2	1728	30
497	497	430000	NoRidge	8	2	3228	15
524	524	184750	Edwards	10	3	4676	0
530	530	200624	Crawfor	6	2	2515	50
608	608	225000	Edwards	5	1	2008	58
692	692	755000	NoRidge	10	3	4316	13
746	746	299800	NWAmes	8	2	2715	32
770	770	538000	StoneBr	8	3	3279	7
943	943	150000	Edwards	4	0	1440	30
1143	1143	424870	CollgCr	8	3	2828	1
1170	1170	625000	NoRidge	10	3	3627	11
1183	1183	745000	NoRidge	10	3	4476	11
1299	1299	160000	Edwards	10	2	5642	0
1351	1351	200000	NAmes	5	4	2634	40
1387	1387	250000	NWAmes	7	2	2784	28

The SAS System

The GLMSELECT Procedure

Data Set	WORK.TRAIN
Dependent Variable	logSalePrice
Selection Method	Stepwise
Select Criterion	SBC
Stop Criterion	SBC
Effect Hierarchy Enforced	None

Number of Observations Read	1460
Number of Observations Used	1460

Dimensions	
Number of Effects	7
Number of Parameters	7

The SAS System

The GLMSELECT Procedure

Stepwise Selection Summary				
Step	Effect Entered	Effect Removed	Number Effects In	SBC
0	Intercept		1	-2673.2872
1	OverallQual		2	-4274.9051
2	TotalSF		3	-4769.4887
3	GarageCars		4	-4956.2887
4	TotalBath		5	-5096.3274
5	HouseAge		6	-5131.1041
6	GrLivArea		7	-5137.9971*
* Optimal Value of Criterion				

Selection stopped because all effects are in the final model.

The SAS System

The GLMSELECT Procedure Selected Model

The selected model is the model at the last step (Step 6).

Effects:	Intercept GrLivArea TotalSF OverallQual TotalBath GarageCars HouseAge
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Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
Model	6	191.03469	31.83912	1107.65
Error	1453	41.76597	0.02874	
Corrected Total	1459	232.80066		

Root MSE	0.16954
Dependent Mean	12.02405
R-Square	0.8206
Adj R-Sq	0.8199
AIC	-3713.00046
AICC	-3712.90121
SBC	-5137.99711

Parameter Estimates				
Parameter	DF	Estimate	Standard Error	t Value
Intercept	1	10.734010	0.031591	339.78
GrLivArea	1	0.000071693	0.000019039	3.77
TotalSF	1	0.000120	0.000012333	9.74
OverallQual	1	0.103804	0.005112	20.31
TotalBath	1	0.067557	0.008200	8.24
GarageCars	1	0.084530	0.008079	10.46
HouseAge	1	-0.001611	0.000215	-7.48

Score Information	
Input Data Set	WORK.TEST_FULL
Output Data Set	WORK.PREDICTED_TEST_FULL

Number of Observations Read	1456
Number of Observations Scored	1456

The SAS System

The REG Procedure
 Model: MODEL1
 Dependent Variable: logSalePrice

Number of Observations Read	1460
Number of Observations Used	1460

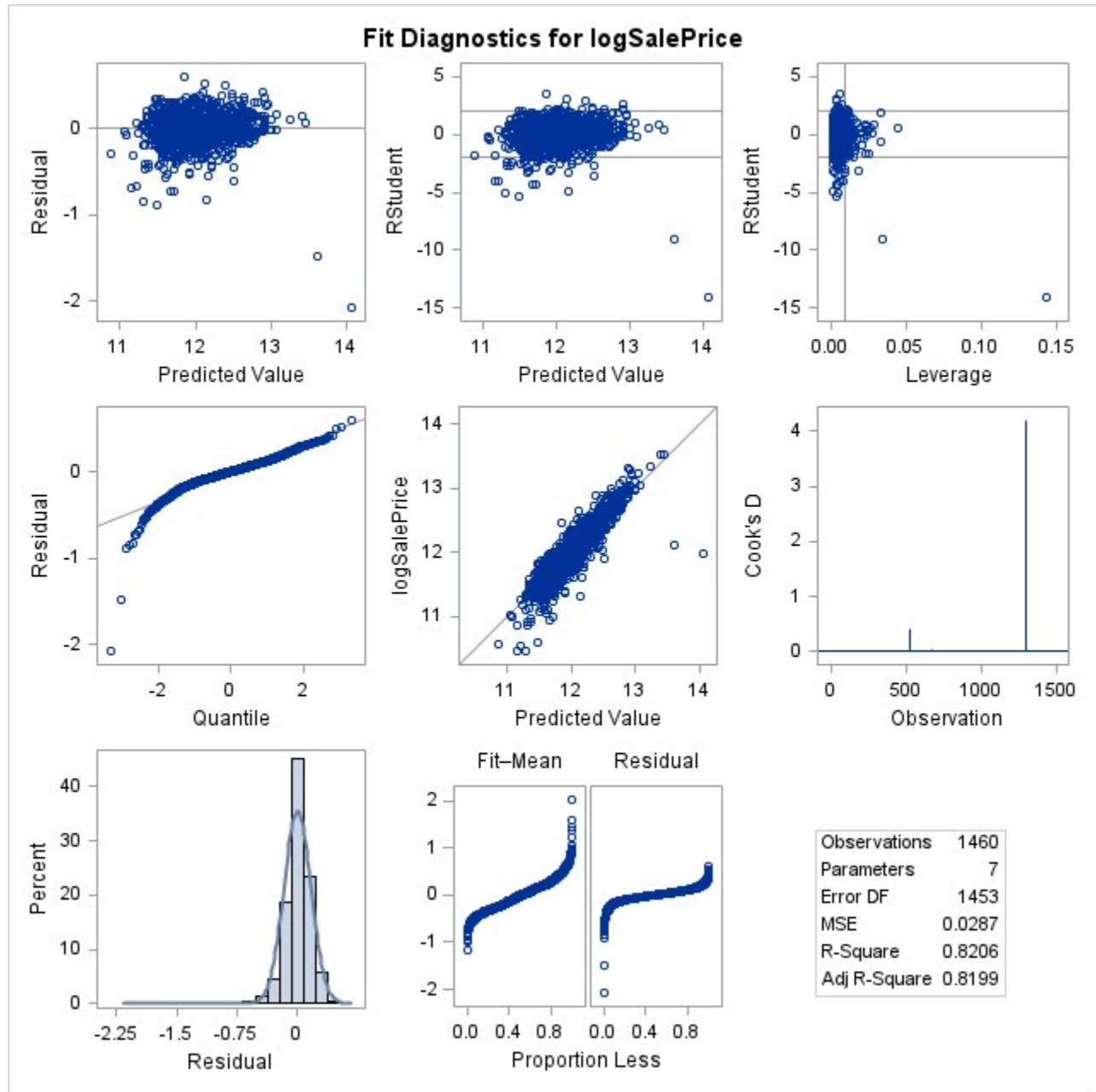
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	191.03469	31.83912	1107.65	<.0001
Error	1453	41.76597	0.02874		
Corrected Total	1459	232.80066			

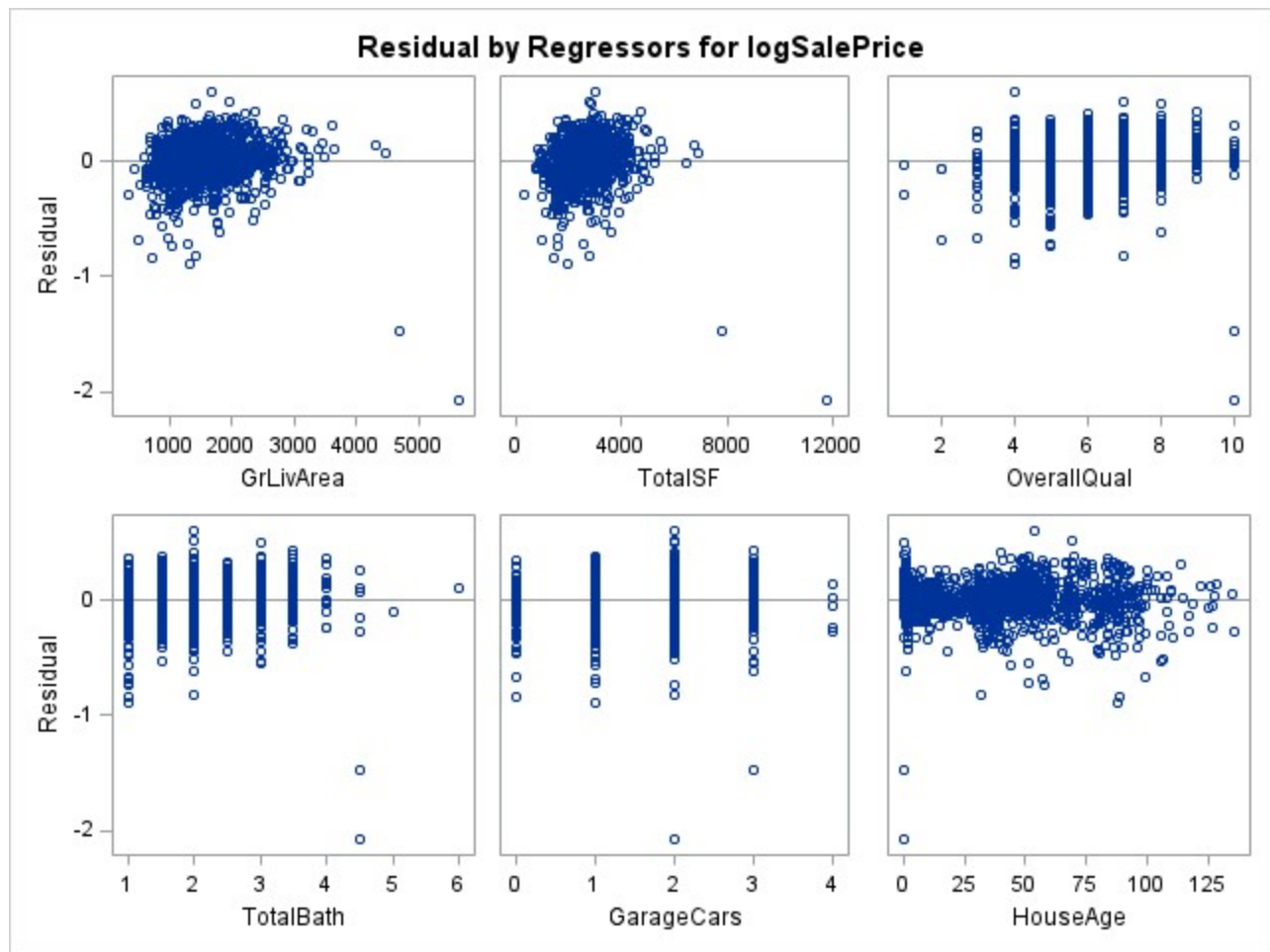
Root MSE	0.16954	R-Square	0.8206
Dependent Mean	12.02405	Adj R-Sq	0.8199
Coeff Var	1.41003		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	10.73401	0.03159	339.78	<.0001
GrLivArea	1	0.00007169	0.00001904	3.77	0.0002
TotalSF	1	0.00012015	0.00001233	9.74	<.0001
OverallQual	1	0.10380	0.00511	20.31	<.0001
TotalBath	1	0.06756	0.00820	8.24	<.0001
GarageCars	1	0.08453	0.00808	10.46	<.0001
HouseAge	1	-0.00161	0.00021548	-7.48	<.0001

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: logSalePrice





The SAS System

The CONTENTS Procedure

Data Set Name	WORK.PREDICTED_TEST_FULL	Observations	1456
Member Type	DATA	Variables	87
Engine	V9	Indexes	0
Created	05/16/2025 14:44:15	Observation Length	512
Last Modified	05/16/2025 14:44:15	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Score Results for DATA=WORK.TEST_FULL		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	12
First Data Page	1
Max Obs per Page	127
Obs in First Data Page	107
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	C:\Users\STONELEIKER\AppData\Local\Temp\SAS Temporary Files_TD3616_STONEAMNERDY_predicted_test_full.sas7bdat
Release Created	9.0401M7
Host Created	X64_10PRO
Owner Name	AUTH\stoneleiker
File Size	832KB
File Size (bytes)	851968

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Informat
7	Alley	Char	2	\$2.	\$2.
52	BedroomAbvGr	Num	8	BEST12.	BEST32.

16	BldgType	Char	6	\$6.	\$6.
32	BsmtCond	Char	2	\$2.	\$2.
33	BsmtExposure	Char	2	\$2.	\$2.
35	BsmtFinSF1	Num	8	BEST12.	BEST32.
37	BsmtFinSF2	Num	8	BEST12.	BEST32.
34	BsmtFinType1	Char	3	\$3.	\$3.
36	BsmtFinType2	Char	3	\$3.	\$3.
48	BsmtFullBath	Num	8	BEST12.	BEST32.
49	BsmtHalfBath	Num	8	BEST12.	BEST32.
31	BsmtQual	Char	2	\$2.	\$2.
38	BsmtUnfSF	Num	8	BEST12.	BEST32.
42	CentralAir	Char	1	\$1.	\$1.
14	Condition1	Char	5	\$5.	\$5.
15	Condition2	Char	4	\$4.	\$4.
43	Electrical	Char	5	\$5.	\$5.
69	EnclosedPorch	Num	8	BEST12.	BEST32.
29	ExterCond	Char	2	\$2.	\$2.
28	ExterQual	Char	2	\$2.	\$2.
24	Exterior1st	Char	7	\$7.	\$7.
25	Exterior2nd	Char	7	\$7.	\$7.
74	Fence	Char	5	\$5.	\$5.
58	FireplaceQu	Char	2	\$2.	\$2.
57	Fireplaces	Num	8	BEST12.	BEST32.
30	Foundation	Char	6	\$6.	\$6.
50	FullBath	Num	8	BEST12.	BEST32.
56	Functional	Char	3	\$3.	\$3.
63	GarageArea	Num	8	BEST12.	BEST32.
62	GarageCars	Num	8	BEST12.	BEST32.
65	GarageCond	Char	2	\$2.	\$2.
61	GarageFinish	Char	3	\$3.	\$3.
64	GarageQual	Char	2	\$2.	\$2.
59	GarageType	Char	6	\$6.	\$6.
60	GarageYrBlt	Num	8	BEST12.	BEST32.
47	GrLivArea	Num	8	BEST12.	BEST32.
51	HalfBath	Num	8	BEST12.	BEST32.

	Heating	Char	4	\$4.	\$4.
41	HeatingQC	Char	2	\$2.	\$2.
82	HouseAge	Num	8		
17	HouseStyle	Char	6	\$6.	\$6.
1	Id	Num	8	BEST12.	BEST32.
83	IsRemodeled	Num	8		
53	KitchenAbvGr	Num	8	BEST12.	BEST32.
54	KitchenQual	Char	2	\$2.	\$2.
9	LandContour	Char	3	\$3.	\$3.
12	LandSlope	Char	3	\$3.	\$3.
5	LotArea	Num	8	BEST12.	BEST32.
11	LotConfig	Char	6	\$6.	\$6.
4	LotFrontage	Char	3	\$3.	\$3.
8	LotShape	Char	3	\$3.	\$3.
46	LowQualFinSF	Num	8	BEST12.	BEST32.
2	MSSubClass	Num	8	BEST12.	BEST32.
3	MSZoning	Char	2	\$2.	\$2.
27	MasVnrArea	Num	8	BEST12.	BEST32.
26	MasVnrType	Char	7	\$7.	\$7.
75	MiscFeature	Char	4	\$4.	\$4.
76	MiscVal	Num	8	BEST12.	BEST32.
77	MoSold	Num	8	BEST12.	BEST32.
13	Neighborhood	Char	7	\$7.	\$7.
68	OpenPorchSF	Num	8	BEST12.	BEST32.
19	OverallCond	Num	8	BEST12.	BEST32.
18	OverallQual	Num	8	BEST12.	BEST32.
66	PavedDrive	Char	1	\$1.	\$1.
72	PoolArea	Num	8	BEST12.	BEST32.
73	PoolQC	Char	2	\$2.	\$2.
23	RoofMatl	Char	7	\$7.	\$7.
22	RoofStyle	Char	5	\$5.	\$5.
80	SaleCondition	Char	7	\$7.	\$7.
86	SalePrice	Num	8	BEST12.	BEST32.
79	SaleType	Char	3	\$3.	\$3.
71	ScreenPorch	Num	8	BEST12.	BEST32.

	Source	Char	4		
6	Street	Char	4	\$4.	\$4.
55	TotRmsAbvGrd	Num	8	BEST12.	BEST32.
84	TotalBath	Num	8		
39	TotalBsmtSF	Num	8	BEST12.	BEST32.
81	TotalSF	Num	8		
10	Utilities	Char	6	\$6.	\$6.
67	WoodDeckSF	Num	8	BEST12.	BEST32.
20	YearBuilt	Num	8	BEST12.	BEST32.
21	YearRemodAdd	Num	8	BEST12.	BEST32.
78	YrSold	Num	8	BEST12.	BEST32.
44	_1stFlrSF	Num	8	BEST12.	BEST32.
45	_2ndFlrSF	Num	8	BEST12.	BEST32.
70	_3SsnPorch	Num	8	BEST12.	BEST32.
87	p_logSalePrice	Num	8		

The SAS System

Obs	Id	SalePrice
1	1461	109538.74911
2	1462	143423.25528
3	1463	161787.89581
4	1464	178871.08797
5	1465	206686.9856
6	1466	175705.61323
7	1467	174139.31972
8	1468	171321.0917
9	1469	194817.33862
10	1470	116323.36094

The SAS System

The GLMSELECT Procedure

Data Set	WORK.TRAIN
Dependent Variable	logSalePrice
Selection Method	Stepwise
Select Criterion	SBC
Stop Criterion	SBC
Effect Hierarchy Enforced	None

Number of Observations Read	1460
Number of Observations Used	1460

Dimensions	
Number of Effects	7
Number of Parameters	7

The SAS System

The GLMSELECT Procedure

Stepwise Selection Summary				
Step	Effect Entered	Effect Removed	Number Effects In	SBC
0	Intercept		1	-2673.2872
1	OverallQual		2	-4274.9051
2	TotalSF		3	-4769.4887
3	GarageCars		4	-4956.2887
4	TotalBath		5	-5096.3274
5	HouseAge		6	-5131.1041
6	GrLivArea		7	-5137.9971*
* Optimal Value of Criterion				

Selection stopped because all effects are in the final model.

The SAS System

The GLMSELECT Procedure Selected Model

The selected model is the model at the last step (Step 6).

Effects:	Intercept GrLivArea TotalSF OverallQual TotalBath GarageCars HouseAge
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Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
Model	6	191.03469	31.83912	1107.65
Error	1453	41.76597	0.02874	
Corrected Total	1459	232.80066		

Root MSE	0.16954
Dependent Mean	12.02405
R-Square	0.8206
Adj R-Sq	0.8199
AIC	-3713.00046
AICC	-3712.90121
SBC	-5137.99711

Parameter Estimates				
Parameter	DF	Estimate	Standard Error	t Value
Intercept	1	10.734010	0.031591	339.78
GrLivArea	1	0.000071693	0.000019039	3.77
TotalSF	1	0.000120	0.000012333	9.74
OverallQual	1	0.103804	0.005112	20.31
TotalBath	1	0.067557	0.008200	8.24
GarageCars	1	0.084530	0.008079	10.46
HouseAge	1	-0.001611	0.000215	-7.48

Score Information	
Input Data Set	WORK.TRAIN
Output Data Set	WORK.TRAIN_SCORED

Number of Observations Read	1460
Number of Observations Scored	1460

The SAS System

Obs	Id	PredictedPrice	ActualPrice
1	1	217289.03	208500
2	2	169154.99	181500
3	3	221467.43	223500
4	4	184048.68	140000
5	5	296803.27	250000
6	6	150561.62	143000
7	7	257528.19	307000
8	8	229141.91	200000
9	9	179057.89	129900
10	10	119036.80	118000