

The SAS System

The CONTENTS Procedure

Data Set Name	WORK.TEMP	Observations	65214
Member Type	DATA	Variables	25
Engine	V9	Indexes	0
Created	04/24/2017 18:13:03	Observation Length	2488
Last Modified	04/24/2017 18:13:03	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

Data Set Page Size	200704
Number of Data Set Pages	816
First Data Page	1
Max Obs per Page	80
Obs in First Data Page	79
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	C:\Users\pbhadani\AppData\Local\Temp\7\SAS Temporary Files_TD12844_IU-CV-IUAW-92_temp.sas7bdat
Release Created	9.0401M2
Host Created	X64_SRV12

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat
2	Author	Char	18	\$18.	\$18.
12	Business_Service	Num	8	BEST12.	BEST32.
23	Business_Services	Num	8		
19	Check_In	Num	8		
10	Check_In___FrontDesk	Num	8	BEST12.	BEST32.
9	Cleanliness	Num	8	BEST12.	BEST32.
1	HotelID	Char	24	\$24.	\$24.
25	Hotel_id	Char	7		
8	Location	Num	8	BEST12.	BEST32.
5	Overall	Num	8	BEST12.	BEST32.
4	Review_Content	Char	2274	\$2274.	\$2274.
7	Rooms	Num	8	BEST12.	BEST32.

3	Sentiment	Char	1	\$1.	\$1.
11	Service	Num	8	BEST12.	BEST32.
21	Services	Num	8		
6	Value	Num	8	BEST12.	BEST32.
22	numBusiness_Services	Num	8		
18	numCheck_In	Num	8		
17	numClean	Num	8		
16	numLoc	Num	8		
13	numOverall	Num	8		
15	numRooms	Num	8		
24	numSentiment	Num	8		
20	numServices	Num	8		
14	numValue	Num	8		

The SAS System

The LOGISTIC Procedure

Model Information	
Data Set	WORK.TEMP
Response Variable	numOverall
Number of Response Levels	5
Model	generalized logit
Optimization Technique	Newton-Raphson

Number of Observations Read	65214
Number of Observations Used	65214

Response Profile		
Ordered Value	numOverall	Total Frequency
1	1	3426
2	2	4902
3	3	6426
4	4	19387
5	5	31073

Logits modeled use numOverall=5 as the reference category.

Class Level Information					
Class	Value	Design Variables			
Services	1	1	0	0	0
	2	0	1	0	0
	3	0	0	1	0
	4	0	0	0	1
	5	0	0	0	0

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	168457.82	74916.116
SC	168494.16	75352.216
-2 Log L	168449.82	74820.116

Testing Global Null Hypothesis: BETA=0			

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	93629.7061	44	<.0001
Score	82466.5277	44	<.0001
Wald	24414.4343	44	<.0001

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
numValue	4	8847.7283	<.0001
numRooms	4	4122.4630	<.0001
numLoc	4	1047.7909	<.0001
numClean	4	581.1520	<.0001
numCheck_In	4	734.4625	<.0001
Services	16	2357.9165	<.0001
numBusiness_Services	4	356.1971	<.0001
numSentiment	4	814.4699	<.0001

Analysis of Maximum Likelihood Estimates							
Parameter		numOverall	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	1	40.0635	0.4494	7948.8412	<.0001
Intercept		2	1	35.0320	0.3592	9510.6881	<.0001
Intercept		3	1	29.2050	0.3097	8894.1281	<.0001
Intercept		4	1	17.7814	0.2176	6677.6953	<.0001
numValue		1	1	-5.7336	0.0732	6138.5177	<.0001
numValue		2	1	-3.9108	0.0484	6542.0062	<.0001
numValue		3	1	-2.7407	0.0361	5751.1783	<.0001
numValue		4	1	-1.3491	0.0217	3860.0177	<.0001
numRooms		1	1	-2.6465	0.0541	2397.3311	<.0001
numRooms		2	1	-2.2957	0.0413	3091.9569	<.0001
numRooms		3	1	-1.9867	0.0337	3465.7880	<.0001
numRooms		4	1	-1.0763	0.0218	2438.9078	<.0001
numLoc		1	1	-1.0650	0.0415	658.7037	<.0001
numLoc		2	1	-0.9477	0.0339	780.9148	<.0001
numLoc		3	1	-0.8292	0.0281	870.0803	<.0001
numLoc		4	1	-0.4875	0.0188	675.1245	<.0001
numClean		1	1	-1.2218	0.0542	508.1696	<.0001
numClean		2	1	-0.9348	0.0445	440.3454	<.0001
numClean		3	1	-0.7588	0.0379	400.9791	<.0001
numClean		4	1	-0.4718	0.0270	306.4169	<.0001
numCheck_In		1	1	-1.1144	0.0479	540.8340	<.0001
numCheck_In		2	1	-0.8668	0.0364	568.3320	<.0001

numCheck_In		3	1	-0.6498	0.0297	480.1847	<.0001
numCheck_In		4	1	-0.3987	0.0197	409.9282	<.0001
Services	1	1	1	4.9475	0.5588	78.4018	<.0001
Services	1	2	1	4.2329	0.5183	66.6980	<.0001
Services	1	3	1	3.2106	0.5086	39.8474	<.0001
Services	1	4	1	1.3316	0.4869	7.4798	0.0062
Services	2	1	1	3.1639	0.2927	116.8085	<.0001
Services	2	2	1	3.5703	0.2066	298.5175	<.0001
Services	2	3	1	3.4254	0.1855	341.1507	<.0001
Services	2	4	1	1.9399	0.1637	140.4876	<.0001
Services	3	1	1	1.2744	0.2400	28.2029	<.0001
Services	3	2	1	1.5798	0.1230	165.0373	<.0001
Services	3	3	1	1.9655	0.0884	494.2813	<.0001
Services	3	4	1	1.2083	0.0632	365.9929	<.0001
Services	4	1	1	0.2483	0.2502	0.9848	0.3210
Services	4	2	1	0.7233	0.1081	44.7657	<.0001
Services	4	3	1	1.0288	0.0636	261.8494	<.0001
Services	4	4	1	0.9773	0.0298	1077.2097	<.0001
numBusiness_Services		1	1	-0.5513	0.0429	165.2976	<.0001
numBusiness_Services		2	1	-0.4485	0.0317	200.0133	<.0001
numBusiness_Services		3	1	-0.3715	0.0247	226.6549	<.0001
numBusiness_Services		4	1	-0.2367	0.0145	268.2931	<.0001
numSentiment		1	1	-2.0591	0.0940	479.7291	<.0001
numSentiment		2	1	-1.7663	0.0876	406.2466	<.0001
numSentiment		3	1	-1.3489	0.0853	250.0758	<.0001
numSentiment		4	1	-0.6693	0.0774	74.8161	<.0001

Odds Ratio Estimates				
Effect	numOverall	Point Estimate	95% Wald Confidence Limits	
numValue	1	0.003	0.003	0.004
numValue	2	0.020	0.018	0.022
numValue	3	0.065	0.060	0.069
numValue	4	0.259	0.249	0.271
numRooms	1	0.071	0.064	0.079
numRooms	2	0.101	0.093	0.109
numRooms	3	0.137	0.128	0.147
numRooms	4	0.341	0.327	0.356
numLoc	1	0.345	0.318	0.374
numLoc	2	0.388	0.363	0.414
numLoc	3	0.436	0.413	0.461

numLoc	4	0.614	0.592	0.637
numClean	1	0.295	0.265	0.328
numClean	2	0.393	0.360	0.428
numClean	3	0.468	0.435	0.504
numClean	4	0.624	0.592	0.658
numCheck_In	1	0.328	0.299	0.360
numCheck_In	2	0.420	0.391	0.451
numCheck_In	3	0.522	0.493	0.553
numCheck_In	4	0.671	0.646	0.698
Services 1 vs 5	1	140.828	47.105	421.026
Services 1 vs 5	2	68.917	24.954	190.328
Services 1 vs 5	3	24.795	9.150	67.190
Services 1 vs 5	4	3.787	1.458	9.835
Services 2 vs 5	1	23.663	13.332	42.001
Services 2 vs 5	2	35.527	23.696	53.267
Services 2 vs 5	3	30.736	21.369	44.209
Services 2 vs 5	4	6.958	5.048	9.589
Services 3 vs 5	1	3.576	2.235	5.724
Services 3 vs 5	2	4.854	3.814	6.177
Services 3 vs 5	3	7.138	6.003	8.489
Services 3 vs 5	4	3.348	2.958	3.789
Services 4 vs 5	1	1.282	0.785	2.093
Services 4 vs 5	2	2.061	1.668	2.548
Services 4 vs 5	3	2.798	2.470	3.169
Services 4 vs 5	4	2.657	2.507	2.817
numBusiness_Services	1	0.576	0.530	0.627
numBusiness_Services	2	0.639	0.600	0.680
numBusiness_Services	3	0.690	0.657	0.724
numBusiness_Services	4	0.789	0.767	0.812
numSentiment	1	0.128	0.106	0.153
numSentiment	2	0.171	0.144	0.203
numSentiment	3	0.260	0.220	0.307
numSentiment	4	0.512	0.440	0.596