The LOGISTIC Procedure

Model Information	
Data Set	CAPSTONE.HR_ATTRITION
Response Variable	Attrition
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	1470
Number of Observations Used	1470

Response Profile		
Ordered Value	Attrition	Total Frequency
1	No	1233
2	Yes	237

Probability modeled is Attrition='Yes'.

Class Level Information		
Class	Value	Design Variables
OverTime	No	1
	Yes	0

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.
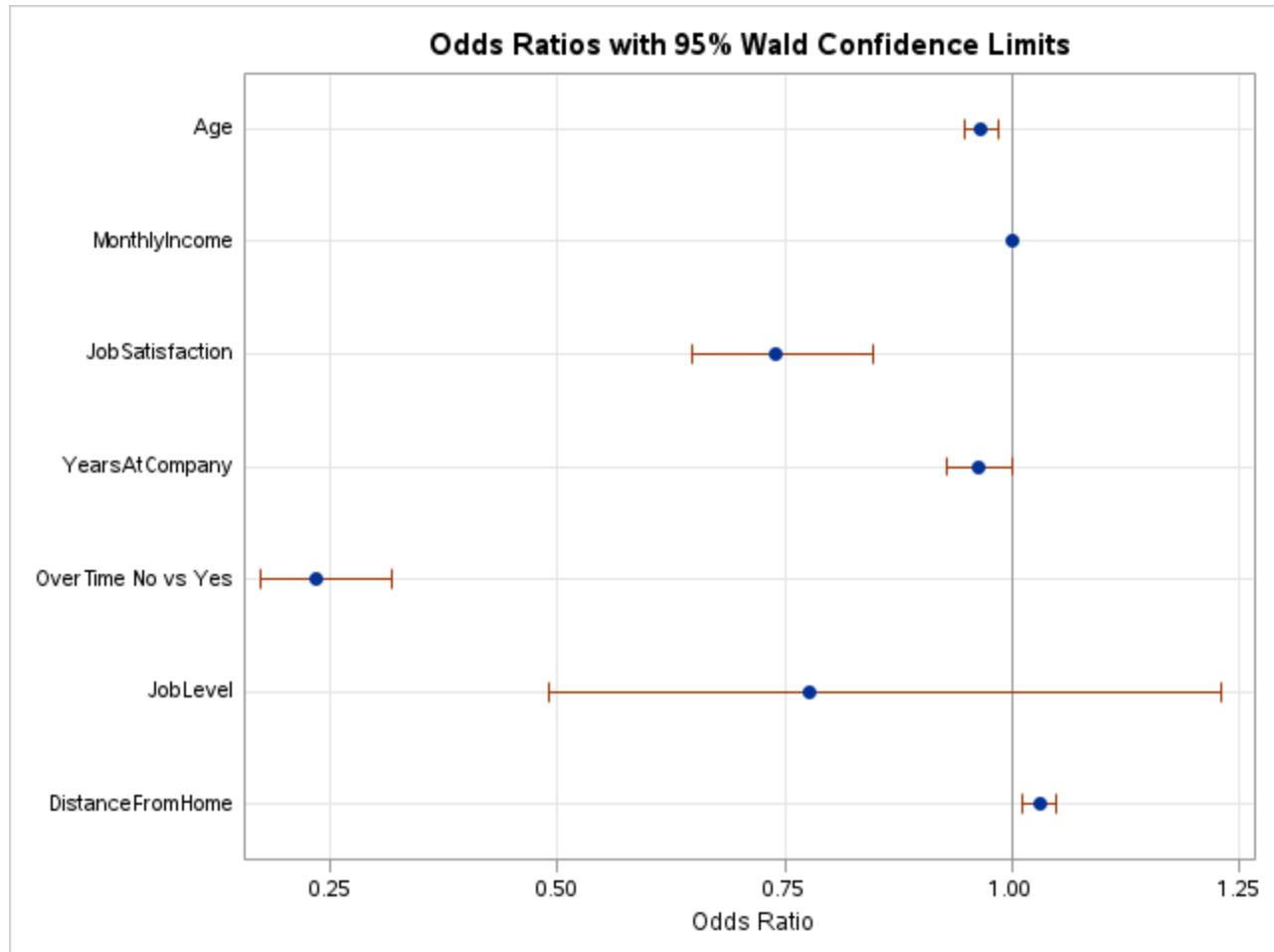
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	1300.583	1134.079
SC	1305.876	1176.423
-2 Log L	1298.583	1118.079

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	180.5034	7	<.0001
Score	172.2495	7	<.0001
Wald	145.6739	7	<.0001

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
Age	1	11.5351	0.0007
MonthlyIncome	1	0.1957	0.6582
JobSatisfaction	1	19.5077	<.0001
YearsAtCompany	1	3.9420	0.0471
OverTime	1	88.0062	<.0001
JobLevel	1	1.1623	0.2810
DistanceFromHome	1	10.5311	0.0012

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	1.8099	0.4084	19.6417	<.0001
Age		1	-0.0342	0.0101	11.5351	0.0007
MonthlyIncome		1	-0.00003	0.000057	0.1957	0.6582
JobSatisfaction		1	-0.3004	0.0680	19.5077	<.0001
YearsAtCompany		1	-0.0374	0.0188	3.9420	0.0471
OverTime	No	1	-1.4548	0.1551	88.0062	<.0001
JobLevel		1	-0.2528	0.2345	1.1623	0.2810
DistanceFromHome		1	0.0297	0.00915	10.5311	0.0012

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Age	0.966	0.947	0.986
MonthlyIncome	1.000	1.000	1.000
JobSatisfaction	0.741	0.648	0.846
YearsAtCompany	0.963	0.928	1.000
OverTime No vs Yes	0.233	0.172	0.316
JobLevel	0.777	0.491	1.230
DistanceFromHome	1.030	1.012	1.049

Odds Ratios with 95% Wald Confidence Limits

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	76.0	Somers' D	0.519
Percent Discordant	24.0	Gamma	0.519

Association of Predicted Probabilities and Observed Responses			
Percent Tied	0.0	Tau-a	0.141
Pairs	292221	c	0.760

ROC Curve for Model
Area Under the Curve = 0.7597

Influence Diagnostics

Attrition   ○ Yes   ○ No

Influence Diagnostics

Attrition   ○ Yes   ○ No

Influence Diagnostics

Influence Diagnostics

Influence Diagnostics

Predicted Probability Diagnostics

Attrition   ○ Yes   ○ No

Leverage Diagnostics

Attrition   ○ Yes   ○ No

Influence on the Model Fit and Parameter Estimates

Attrition   + Yes   ○ No

Predicted Probabilities for Attrition=Yes
At MonthlyIncome=6503 JobSatisfaction=2.729 YearsAtCompany=7.008 JobLevel=2.064
DistanceFromHome=9.193

OverTime ——— No ——— Yes

Calibration for Attrition