

The CONTENTS Procedure

| | | | |
|----------------------------|---|-----------------------------|-----|
| Data Set Name | LIBREF.AA | Observations | 50 |
| Member Type | DATA | Variables | 17 |
| Engine | V9 | Indexes | 0 |
| Created | 06/05/2018 15:41:55 | Observation Length | 136 |
| Last Modified | 06/05/2018 15:41:55 | Deleted Observations | 0 |
| Protection | | Compressed | NO |
| Data Set Type | | Sorted | NO |
| Label | Predicted Values and Diagnostic Statistics | | |
| Data Representation | SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64 | | |
| Encoding | utf-8 Unicode (UTF-8) | | |

| Engine/Host Dependent Information | |
|-----------------------------------|---|
| Data Set Page Size | 131072 |
| Number of Data Set Pages | 1 |
| First Data Page | 1 |
| Max Obs per Page | 962 |
| Obs in First Data Page | 50 |
| Number of Data Set Repairs | 0 |
| Filename | /home/ch15mtech110110/LogisticReg/aa.sas7bdat |
| Release Created | 9.0401M5 |
| Host Created | Linux |
| Inode Number | 93194492 |
| Access Permission | rw-r--r-- |
| Owner Name | ch15mtech110110 |
| File Size | 256KB |
| File Size (bytes) | 262144 |

| Alphabetic List of Variables and Attributes | | | | | | |
|---|----------------------|------|-----|---------|----------|----------------------------|
| # | Variable | Type | Len | Format | Informat | Label |
| 1 | Employee_ID | Num | 8 | BEST12. | BEST32. | |
| 5 | Marital_Status | Num | 8 | BEST12. | BEST32. | |
| 4 | Relocation_Indicator | Num | 8 | BEST12. | BEST32. | |
| 2 | Retain_Indicator | Num | 8 | BEST12. | BEST32. | |
| 3 | Sex_Indicator | Num | 8 | BEST12. | BEST32. | |
| 6 | _LEVEL_ | Num | 8 | BEST12. | BEST32. | Response Value |
| 10 | _LEVEL_2 | Num | 8 | BEST12. | BEST32. | Response Value |
| 14 | _LEVEL_3 | Num | 8 | BEST12. | BEST32. | Response Value |
| 8 | lcl_ | Num | 8 | | | Lower 95% Confidence Limit |

The CONTENTS Procedure

| Alphabetic List of Variables and Attributes | | | | | | |
|---|----------|------|-----|--------|----------|----------------------------|
| # | Variable | Type | Len | Format | Informat | Label |
| 12 | lcl_2 | Num | 8 | | | Lower 95% Confidence Limit |
| 16 | lcl_3 | Num | 8 | | | Lower 95% Confidence Limit |
| 7 | p_ | Num | 8 | | | Estimated Probability |
| 11 | p_2 | Num | 8 | | | Estimated Probability |
| 15 | p_3 | Num | 8 | | | Estimated Probability |
| 9 | ucl_ | Num | 8 | | | Upper 95% Confidence Limit |
| 13 | ucl_2 | Num | 8 | | | Upper 95% Confidence Limit |
| 17 | ucl_3 | Num | 8 | | | Upper 95% Confidence Limit |

The FREQ Procedure

| Retain_Indicator | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|------------------|-----------|---------|-------------------------|-----------------------|
| 0 | 22 | 44.00 | 22 | 44.00 |
| 1 | 28 | 56.00 | 50 | 100.00 |

The LOGISTIC Procedure

| Model Information | | |
|---------------------------|------------------|--|
| Data Set | LIBREF.AA | Predicted Values and Diagnostic Statistics |
| Response Variable | Retain_Indicator | |
| Number of Response Levels | 2 | |
| Model | binary logit | |
| Optimization Technique | Fisher's scoring | |

| | |
|-----------------------------|----|
| Number of Observations Read | 50 |
| Number of Observations Used | 50 |

| Response Profile | | |
|------------------|------------------|-----------------|
| Ordered Value | Retain_Indicator | Total Frequency |
| 1 | 0 | 22 |
| 2 | 1 | 28 |

Probability modeled is Retain_Indicator='1'.

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

| Model Fit Statistics | | |
|----------------------|----------------|--------------------------|
| Criterion | Intercept Only | Intercept and Covariates |
| AIC | 70.593 | 71.985 |
| SC | 72.505 | 81.545 |
| -2 Log L | 68.593 | 61.985 |

| Testing Global Null Hypothesis: BETA=0 | | | |
|--|------------|----|------------|
| Test | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio | 6.6080 | 4 | 0.1581 |
| Score | 6.2767 | 4 | 0.1794 |
| Wald | 5.6438 | 4 | 0.2274 |

The LOGISTIC Procedure

| Analysis of Maximum Likelihood Estimates | | | | | |
|--|----|----------|----------------|-----------------|------------|
| Parameter | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
| Intercept | 1 | -1.2357 | 0.8926 | 1.9164 | 0.1663 |
| Sex_Indicator | 1 | 0.4983 | 0.6372 | 0.6115 | 0.4342 |
| Relocation_Indicator | 1 | 0.5974 | 0.6287 | 0.9029 | 0.3420 |
| Marital_Status | 1 | -0.4425 | 0.6436 | 0.4727 | 0.4917 |
| Employee_ID | 1 | 0.0443 | 0.0226 | 3.8531 | 0.0497 |

| Odds Ratio Estimates | | | |
|----------------------|----------------|----------------------------|-------|
| Effect | Point Estimate | 95% Wald Confidence Limits | |
| Sex_Indicator | 1.646 | 0.472 | 5.739 |
| Relocation_Indicator | 1.817 | 0.530 | 6.232 |
| Marital_Status | 0.642 | 0.182 | 2.268 |
| Employee_ID | 1.045 | 1.000 | 1.093 |

| Association of Predicted Probabilities and Observed Responses | | | |
|---|------|-----------|-------|
| Percent Concordant | 70.9 | Somers' D | 0.419 |
| Percent Discordant | 29.1 | Gamma | 0.419 |
| Percent Tied | 0.0 | Tau-a | 0.211 |
| Pairs | 616 | c | 0.709 |