```
 1  *------------------------------------------------------------
    -*
 2  User:                    mpaul
 3  Date:                    April 27, 2022
 4  Time:                    22:03:06
 5  *------------------------------------------------------------
    -*
 6  * Training Output
 7  *------------------------------------------------------------
    -*
 8
 9
10
11
12  Variable Summary
13
14                  Measurement      Frequency
15  Role            Level            Count
16
17  INPUT           INTERVAL              38
18  REJECTED        INTERVAL               1
19  TARGET          INTERVAL               1
20
21
22
23
24  Predicted and decision variables
25
26  Type            Variable               Label
27
28  TARGET          Attrition
29  PREDICTED       P_Attrition    Predicted: Attrition
30  RESIDUAL        R_Attrition    Residual: Attrition
31
32
33
```

```
34

35

36 The DMREG Procedure

37

38                  Model Information

39

40 Training Data Set          WORK.EM_DMREG.VIEW
41 DMDB Catalog               WORK.REG2_DMDB
42 Target Variable            Attrition
43 Target Measurement Level   Interval
44 Error                      Normal
45 Link Function              Identity
46 Number of Model Parameters 39
47 Number of Observations     882

48

49

50

51

52 Stepwise Selection Procedure

53

54

55 Step 0: Intercept entered.

56

57

58                              Analysis of Variance

59

60                                    Sum of
61 Source                  DF        Squares      Mean Square
    F Value     Pr > F

62

63 Model                    0              0                  .
           .         .

64 Error                  881     136.000000       0.154370
65 Corrected Total        881     136.000000

66

67
```

```
68                    Model Fit Statistics
69
70 R-Square          0.0000     Adj R-Sq          0.0000
71 AIC          -1646.9318      BIC          -1648.6782
72 SBC          -1642.1496      C(p)          19689.1468
73
74
75                    Analysis of Maximum Likelihood Estimates
76
77                                                   Standard
78 Parameter                     DF     Estimate          Error
   t Value     Pr > |t|
79
80 Intercept                      1       0.1905         0.0132
      14.40       <.0001
81
82
83 Step 1: Effect EnvironmentSatisfaction entered.
84
85
86                         Analysis of Variance
87
88                                   Sum of
89 Source                    DF       Squares      Mean Square
   F Value     Pr > F
90
91 Model                      1     112.582237      112.582237
     4230.65     <.0001
92 Error                    880      23.417763        0.026611
93 Corrected Total          881     136.000000
94
95
96               Model Fit Statistics
97
98 R-Square          0.8278     Adj R-Sq          0.8276
99 AIC          -3196.5109      BIC          -3198.6428
```

```
100  SBC            -3186.9466      C(p)            2663.7898
101
102
103                    Analysis of Maximum Likelihood Estimates
104
105                                                        Standard
106  Parameter                      DF      Estimate        Error
      t Value    Pr > |t|
107
108  Intercept                      1        1.2293        0.0169
        72.79        <.0001
109  EnvironmentSatisfaction        1       -0.3277       0.00504
      -65.04        <.0001
110
111
112  Step 2: Effect WorkLifeBalance entered.
113
114
115                        Analysis of Variance
116
117                                      Sum of
118  Source                  DF        Squares      Mean Square
      F Value    Pr > F
119
120  Model                   2      122.540865       61.270432
      4001.50    <.0001
121  Error                 879       13.459135        0.015312
122  Corrected Total       881      136.000000
123
124
125              Model Fit Statistics
126
127  R-Square         0.9010      Adj R-Sq          0.9008
128  AIC           -3682.9950      BIC           -3685.0376
129  SBC           -3668.6484      C(p)            1159.6098
130
```

```
131
132                    Analysis of Maximum Likelihood Estimates
133
134                                                       Standard
135 Parameter                      DF      Estimate         Error
      t Value      Pr > |t|
136
137 Intercept                       1       1.4220        0.0149
        95.60         <.0001
138 EnvironmentSatisfaction         1      -0.1947        0.00647
       -30.11         <.0001
139 WorkLifeBalance                 1      -0.2223        0.00872
       -25.50         <.0001
140
141
142 Step 3: Effect PercentSalaryHike entered.
143
144
145                         Analysis of Variance
146
147                                 Sum of
148 Source                  DF       Squares      Mean Square
      F Value      Pr > F
149
150 Model                    3     125.625613      41.875204
      3543.96     <.0001
151 Error                  878      10.374387       0.011816
152 Corrected Total        881     136.000000
153
154
155              Model Fit Statistics
156
157 R-Square         0.9237      Adj R-Sq         0.9235
158 AIC           -3910.5955      BIC          -3912.4820
159 SBC           -3891.4667      C(p)           695.0610
160
```

```
161
162                     Analysis of Maximum Likelihood Estimates
163
164                                                        Standard
165 Parameter                       DF     Estimate         Error
      t Value     Pr > |t|
166
167 Intercept                        1       1.6133        0.0176
        91.51        <.0001
168 EnvironmentSatisfaction          1      -0.1559        0.00617
       -25.28        <.0001
169 PercentSalaryHike                1      -0.0258        0.00159
       -16.16        <.0001
170 WorkLifeBalance                  1      -0.1763        0.00817
       -21.59        <.0001
171
172
173 Step 4: Effect NumCompaniesWorked entered.
174
175
176                           Analysis of Variance
177
178                                    Sum of
179 Source                   DF         Squares      Mean Square
      F Value     Pr > F
180
181 Model                     4      127.302559       31.825640
      3209.11     <.0001
182 Error                    877       8.697441        0.009917
183 Corrected Total          881     136.000000
184
185
186              Model Fit Statistics
187
188 R-Square        0.9360     Adj R-Sq        0.9358
189 AIC         -4064.1019     BIC         -4065.6141
```

```
190  SBC            -4040.1910     C(p)            443.4334
191
192
193                     Analysis of Maximum Likelihood Estimates
194
195                                                      Standard
196  Parameter                       DF     Estimate        Error
        t Value    Pr > |t|
197
198  Intercept                        1       1.3178       0.0279
         47.27       <.0001
199  EnvironmentSatisfaction          1      -0.1349      0.00588
        -22.96       <.0001
200  NumCompaniesWorked               1       0.0338      0.00260
         13.00       <.0001
201  PercentSalaryHike                1      -0.0215      0.00150
        -14.35       <.0001
202  WorkLifeBalance                  1      -0.1524      0.00771
        -19.78       <.0001
203
204
205  Step 5: Effect RelationshipSatisfaction entered.
206
207
208                          Analysis of Variance
209
210                                     Sum of
211  Source                   DF        Squares     Mean Square
        F Value    Pr > F
212
213  Model                     5     128.378287       25.675657
       2951.03     <.0001
214  Error                   876       7.621713        0.008701
215  Corrected Total         881     136.000000
216
217
```

```
218                    Model Fit Statistics
219
220 R-Square          0.9440      Adj R-Sq          0.9436
221 AIC          -4178.5504      BIC          -4179.4791
222 SBC          -4149.8572      C(p)           282.7363
223
224
225                    Analysis of Maximum Likelihood Estimates
226
227                                                 Standard
228 Parameter                    DF     Estimate          Error
      t Value     Pr > |t|
229
230 Intercept                     1      1.3672        0.0265
        51.62       <.0001
231 EnvironmentSatisfaction       1     -0.1162       0.00575
      -20.20       <.0001
232 NumCompaniesWorked            1      0.0301       0.00246
        12.22       <.0001
233 PercentSalaryHike             1     -0.0186       0.00143
      -13.03       <.0001
234 RelationshipSatisfaction      1     -0.0642       0.00578
      -11.12       <.0001
235 WorkLifeBalance               1     -0.1364       0.00736
      -18.53       <.0001
236
237
238 Step 6: Effect PerformanceRating entered.
239
240
241                         Analysis of Variance
242
243                                 Sum of
244 Source               DF         Squares      Mean Square
      F Value     Pr > F
245
```

```
246 Model                          6       128.762026         21.460338
      2594.34      <.0001
247 Error                        875         7.237974          0.008272
248 Corrected Total             881       136.000000
249
250
251                    Model Fit Statistics
252
253 R-Square          0.9468      Adj R-Sq          0.9464
254 AIC            -4222.1144      BIC            -4222.9101
255 SBC            -4188.6390      C(p)             226.6981
256
257
258                    Analysis of Maximum Likelihood Estimates
259
260                                                        Standard
261 Parameter                      DF      Estimate          Error
      t Value      Pr > |t|
262
263 Intercept                      1        1.2059          0.0350
      34.42        <.0001
264 EnvironmentSatisfaction        1       -0.1093          0.00570
      -19.17       <.0001
265 NumCompaniesWorked             1        0.0284          0.00241
      11.79        <.0001
266 PercentSalaryHike              1       -0.0253          0.00170
      -14.84       <.0001
267 PerformanceRating              1        0.0708          0.0104
       6.81        <.0001
268 RelationshipSatisfaction       1       -0.0593          0.00568
      -10.43       <.0001
269 WorkLifeBalance                1       -0.1291          0.00726
      -17.79       <.0001
270
271
272 Step 7: Effect MaritalStatus_Married entered.
```

```
273
274
275                        Analysis of Variance
276
277                                      Sum of
278  Source                  DF         Squares      Mean Square
       F Value     Pr > F
279
280  Model                   7       129.131436       18.447348
       2347.36    <.0001
281  Error                 874         6.868564        0.007859
282  Corrected Total       881       136.000000
283
284
285              Model Fit Statistics
286
287  R-Square        0.9495      Adj R-Sq        0.9491
288  AIC          -4266.3190      BIC         -4266.7800
289  SBC          -4228.0615      C(p)           172.8272
290
291
292                  Analysis of Maximum Likelihood Estimates
293
294                                              Standard
295  Parameter                   DF     Estimate       Error
       t Value     Pr > |t|
296
297  Intercept                    1      1.1953        0.0342
        34.97       <.0001
298  EnvironmentSatisfaction      1     -0.1033        0.00563
       -18.36       <.0001
299  MaritalStatus_Married        1     -0.0699        0.0102
        -6.86       <.0001
300  NumCompaniesWorked           1      0.0276        0.00235
        11.75       <.0001
301  PercentSalaryHike            1     -0.0249        0.00166
```

```
      -14.97       <.0001
302 PerformanceRating                  1      0.0707      0.0101
        6.98       <.0001
303 RelationshipSatisfaction           1     -0.0548      0.00557
       -9.84       <.0001
304 WorkLifeBalance                    1     -0.1187      0.00723
      -16.42       <.0001
305
306
307 Step 8: Effect JobInvolvement entered.
308
309
310                           Analysis of Variance
311
312                                     Sum of
313 Source                 DF          Squares       Mean Square
     F Value     Pr > F
314
315 Model                   8      129.380080        16.172510
     2132.74     <.0001
316 Error                 873        6.619920         0.007583
317 Corrected Total       881      136.000000
318
319
320            Model Fit Statistics
321
322 R-Square        0.9513      Adj R-Sq          0.9509
323 AIC          -4296.8399     BIC            -4297.0116
324 SBC          -4253.8002     C(p)             137.2214
325
326
327               Analysis of Maximum Likelihood Estimates
328
329                                              Standard
330 Parameter                     DF     Estimate       Error
     t Value     Pr > |t|
```

```
331
332  Intercept                        1      1.2244        0.0340
        36.06        <.0001
333  EnvironmentSatisfaction          1     -0.0953        0.00570
        -16.71       <.0001
334  JobInvolvement                   1     -0.0243        0.00425
        -5.73        <.0001
335  MaritalStatus_Married            1     -0.0649        0.0101
        -6.45        <.0001
336  NumCompaniesWorked               1      0.0265        0.00232
        11.42        <.0001
337  PercentSalaryHike                1     -0.0249        0.00163
        -15.24       <.0001
338  PerformanceRating                1      0.0696        0.00995
         6.99        <.0001
339  RelationshipSatisfaction         1     -0.0513        0.00551
        -9.32        <.0001
340  WorkLifeBalance                  1     -0.1172        0.00711
        -16.49       <.0001
341
342
343  Step 9: Effect BusinessTravel_Frequently entered.
344
345
346                             Analysis of Variance
347
348                                      Sum of
349  Source                    DF        Squares      Mean Square
      F Value     Pr > F
350
351  Model                      9     129.565990       14.396221
       1951.12    <.0001
352  Error                    872       6.434010        0.007378
353  Corrected Total          881     136.000000
354
355
```

```
356                    Model Fit Statistics
357
358 R-Square         0.9527     Adj R-Sq         0.9522
359 AIC          -4319.9640     BIC          -4319.8539
360 SBC          -4272.1421     C(p)            111.1036
361
362
363                    Analysis of Maximum Likelihood Estimates
364
365                                                     Standard
366 Parameter                     DF      Estimate        Error
    t Value     Pr > |t|
367
368  Intercept                     1       1.1774       0.0348
        33.85       <.0001
369  BusinessTravel_Frequently     1       0.0521       0.0104
        5.02        <.0001
370  EnvironmentSatisfaction       1      -0.0915       0.00567
        -16.12      <.0001
371  JobInvolvement                1      -0.0241       0.00419
        -5.74       <.0001
372  MaritalStatus_Married         1      -0.0612       0.00995
        -6.16       <.0001
373  NumCompaniesWorked            1       0.0251       0.00230
        10.90       <.0001
374  PercentSalaryHike             1      -0.0237       0.00163
        -14.57      <.0001
375  PerformanceRating             1       0.0696       0.00982
        7.09        <.0001
376  RelationshipSatisfaction      1      -0.0509       0.00544
        -9.36       <.0001
377  WorkLifeBalance               1      -0.1155       0.00702
        -16.46      <.0001
378
379
380  Step 10: Effect DistanceFromHome entered.
```

```
381
382
383                         Analysis of Variance
384
385                                   Sum of
386 Source                  DF       Squares      Mean Square
     F Value    Pr > F
387
388 Model                   10    129.762240       12.976224
     1811.92    <.0001
389 Error                  871      6.237760        0.007162
390 Corrected Total        881    136.000000
391
392
393             Model Fit Statistics
394
395 R-Square         0.9541     Adj R-Sq         0.9536
396 AIC           -4345.2856     BIC           -4344.7264
397 SBC           -4292.6815     C(p)             83.4220
398
399
400             Analysis of Maximum Likelihood Estimates
401
402                                             Standard
403 Parameter                   DF    Estimate        Error
     t Value    Pr > |t|
404
405 Intercept                    1      1.1304       0.0354
      31.91       <.0001
406 BusinessTravel_Frequently    1      0.0546       0.0102
       5.33       <.0001
407 DistanceFromHome             1      0.00258     0.000493
       5.23       <.0001
408 EnvironmentSatisfaction      1     -0.0882      0.00563
     -15.67       <.0001
409 JobInvolvement               1     -0.0250      0.00414
```

```
        -6.05        <.0001
410 MaritalStatus_Married              1      -0.0600       0.00980
        -6.13        <.0001
411 NumCompaniesWorked                 1       0.0249       0.00227
        10.97        <.0001
412 PercentSalaryHike                  1      -0.0231       0.00161
        -14.37       <.0001
413 PerformanceRating                  1       0.0694       0.00967
         7.17        <.0001
414 RelationshipSatisfaction           1      -0.0506       0.00535
        -9.44        <.0001
415 WorkLifeBalance                    1      -0.1122       0.00694
        -16.16       <.0001
416
417
418 Step 11: Effect JobSatisfaction entered.
419
420
421                          Analysis of Variance
422
423                                     Sum of
424 Source                   DF        Squares      Mean Square
     F Value     Pr > F
425
426 Model                    11      129.887016      11.807911
     1680.50     <.0001
427 Error                   870        6.112984       0.007026
428 Corrected Total         881      136.000000
429
430
431              Model Fit Statistics
432
433 R-Square        0.9551      Adj R-Sq        0.9545
434 AIC         -4361.1073      BIC         -4360.2161
435 SBC         -4303.7210      C(p)            66.5505
436
```

```
437
438                    Analysis of Maximum Likelihood Estimates
439
440                                                        Standard
441  Parameter                        DF    Estimate         Error
        t Value     Pr > |t|
442
443  Intercept                         1      1.1459        0.0353
        32.48        <.0001
444  BusinessTravel_Frequently         1      0.0549        0.0101
        5.42        <.0001
445  DistanceFromHome                  1      0.00256      0.000488
        5.25        <.0001
446  EnvironmentSatisfaction           1     -0.0853        0.00562
       -15.18        <.0001
447  JobInvolvement                    1     -0.0248        0.00410
        -6.06        <.0001
448  JobSatisfaction                   1     -0.0114        0.00271
        -4.21        <.0001
449  MaritalStatus_Married             1     -0.0597        0.00971
        -6.15        <.0001
450  NumCompaniesWorked                1      0.0245        0.00225
        10.87        <.0001
451  PercentSalaryHike                 1     -0.0225        0.00160
       -14.04        <.0001
452  PerformanceRating                 1      0.0671        0.00960
         7.00        <.0001
453  RelationshipSatisfaction          1     -0.0521        0.00532
        -9.80        <.0001
454  WorkLifeBalance                   1     -0.1103        0.00689
       -16.00        <.0001
455
456
457  Step 12: Effect Gender_female entered.
458
459
```

```
460                             Analysis of Variance
461
462                                       Sum of
463  Source                  DF          Squares       Mean Square
       F Value    Pr > F
464
465  Model                   12       129.966780        10.830565
       1559.99    <.0001
466  Error                  869         6.033220         0.006943
467  Corrected Total        881       136.000000
468
469
470            Model Fit Statistics
471
472  R-Square        0.9556     Adj R-Sq        0.9550
473  AIC          -4370.6917    BIC          -4369.5626
474  SBC          -4308.5232    C(p)            56.4867
475
476
477              Analysis of Maximum Likelihood Estimates
478
479                                            Standard
480  Parameter                    DF     Estimate        Error
       t Value    Pr > |t|
481
482  Intercept                    1       1.1507        0.0351
        32.78       <.0001
483  BusinessTravel_Frequently    1       0.0568        0.0101
         5.62       <.0001
484  DistanceFromHome             1       0.00246       0.000487
         5.05       <.0001
485  EnvironmentSatisfaction      1      -0.0833        0.00561
       -14.85       <.0001
486  Gender_female                1      -0.0198        0.00585
        -3.39        0.0007
487  JobInvolvement               1      -0.0249        0.00407
```

```
          -6.12        <.0001
488  JobSatisfaction                    1      -0.0117       0.00269
          -4.36        <.0001
489  MaritalStatus_Married              1      -0.0612       0.00966
          -6.33        <.0001
490  NumCompaniesWorked                 1       0.0243       0.00224
          10.85        <.0001
491  PercentSalaryHike                  1      -0.0227       0.00159
         -14.26        <.0001
492  PerformanceRating                  1       0.0679       0.00954
           7.11        <.0001
493  RelationshipSatisfaction           1      -0.0525       0.00529
          -9.93        <.0001
494  WorkLifeBalance                    1      -0.1094       0.00686
         -15.94        <.0001

495

496

497  Step 13: Effect StockOptionLevel entered.

498

499

500                          Analysis of Variance

501

502                                  Sum of
503  Source                DF        Squares      Mean Square
      F Value    Pr > F
504
505  Model                 13      130.022364      10.001720
       1452.33   <.0001
506  Error                868        5.977636       0.006887
507  Corrected Total      881      136.000000
508

509

510              Model Fit Statistics

511

512  R-Square      0.9560    Adj R-Sq       0.9554
513  AIC        -4376.8552    BIC        -4375.5402
```

```
514 SBC            -4309.9045    C(p)            50.0799
515
516
517                     Analysis of Maximum Likelihood Estimates
518
519                                              Standard
520 Parameter                   DF    Estimate        Error
      t Value    Pr > |t|
521
522 Intercept                    1     1.1488        0.0350
        32.85      <.0001
523 BusinessTravel_Frequently    1     0.0557        0.0101
         5.53      <.0001
524 DistanceFromHome             1     0.00238      0.000485
         4.91      <.0001
525 EnvironmentSatisfaction      1    -0.0833        0.00559
       -14.91      <.0001
526 Gender_female                1    -0.0191        0.00583
        -3.28      0.0011
527 JobInvolvement               1    -0.0250        0.00406
        -6.16      <.0001
528 JobSatisfaction              1    -0.0121        0.00269
        -4.49      <.0001
529 MaritalStatus_Married        1    -0.0662        0.00978
        -6.77      <.0001
530 NumCompaniesWorked           1     0.0239        0.00223
        10.72      <.0001
531 PercentSalaryHike            1    -0.0227        0.00158
       -14.36      <.0001
532 PerformanceRating            1     0.0673        0.00951
         7.08      <.0001
533 RelationshipSatisfaction     1    -0.0514        0.00528
        -9.73      <.0001
534 StockOptionLevel             1     0.00955       0.00336
         2.84      0.0046
535 WorkLifeBalance              1    -0.1092        0.00683
```

```
      -15.98       <.0001

536

537

538  Step 14: Effect OverTime entered.

539

540

541                             Analysis of Variance

542

543                                    Sum of
544  Source                   DF       Squares      Mean Square
       F Value     Pr > F
545
546  Model                    14    130.074615        9.291044
       1359.46    <.0001
547  Error                   867      5.925385        0.006834
548  Corrected Total         881    136.000000

549

550

551              Model Fit Statistics

552

553  R-Square       0.9564      Adj R-Sq        0.9557
554  AIC         -4382.5987      BIC         -4381.0738
555  SBC         -4310.8658      C(p)            44.1773

556

557

558                  Analysis of Maximum Likelihood Estimates

559

560                                                    Standard
561  Parameter                    DF     Estimate        Error
       t Value     Pr > |t|
562
563  Intercept                     1      1.1576         0.0350
       33.10       <.0001
564  BusinessTravel_Frequently     1      0.0554         0.0100
        5.53       <.0001
565  DistanceFromHome              1      0.00215        0.000490
```

```
       4.39        <.0001
566  EnvironmentSatisfaction          1     -0.0835      0.00557
       -14.99       <.0001
567  Gender_female                    1     -0.0179      0.00583
       -3.08        0.0021
568  JobInvolvement                   1     -0.0252      0.00404
       -6.23        <.0001
569  JobSatisfaction                  1     -0.0117      0.00268
       -4.38        <.0001
570  MaritalStatus_Married            1     -0.0680      0.00977
       -6.96        <.0001
571  NumCompaniesWorked               1      0.0235      0.00223
       10.57        <.0001
572  OverTime                         1     -0.0177      0.00640
       -2.77        0.0058
573  PercentSalaryHike                1     -0.0225      0.00158
       -14.24       <.0001
574  PerformanceRating                1      0.0654      0.00950
        6.89        <.0001
575  RelationshipSatisfaction         1     -0.0499      0.00529
       -9.44        <.0001
576  StockOptionLevel                 1      0.00954     0.00335
        2.85        0.0045
577  WorkLifeBalance                  1     -0.1080      0.00682
       -15.84       <.0001
578
579
580  Step 15: Effect TotalWorkingYears entered.
581
582
583                          Analysis of Variance
584
585                                   Sum of
586  Source                 DF       Squares      Mean Square
     F Value     Pr > F
587
```

```
588 Model                        15      130.110136        8.674009
      1275.36      <.0001
589 Error                       866        5.889864        0.006801
590 Corrected Total             881      136.000000
591
592
593                 Model Fit Statistics
594
595 R-Square         0.9567      Adj R-Sq         0.9559
596 AIC         -4385.9019       BIC         -4384.2184
597 SBC         -4309.3868       C(p)            40.8051
598
599
600                 Analysis of Maximum Likelihood Estimates
601
602                                                Standard
603 Parameter                    DF     Estimate          Error
      t Value      Pr > |t|
604
605 Intercept                     1       1.1566          0.0349
      33.15        <.0001
606 BusinessTravel_Frequently     1       0.0545          0.0100
      5.44         <.0001
607 DistanceFromHome              1       0.00215         0.000489
      4.40         <.0001
608 EnvironmentSatisfaction       1      -0.0829          0.00556
      -14.92       <.0001
609 Gender_female                 1      -0.0175          0.00582
      -3.01         0.0027
610 JobInvolvement                1      -0.0253          0.00403
      -6.27        <.0001
611 JobSatisfaction               1      -0.0119          0.00267
      -4.44        <.0001
612 MaritalStatus_Married         1      -0.0675          0.00975
      -6.93        <.0001
613 NumCompaniesWorked            1       0.0250          0.00232
```

```
        10.81         <.0001
614 OverTime                          1     -0.0180      0.00639
        -2.82         0.0050
615 PercentSalaryHike                 1     -0.0224      0.00158
        -14.17        <.0001
616 PerformanceRating                 1      0.0652      0.00947
         6.88         <.0001
617 RelationshipSatisfaction          1     -0.0492      0.00528
        -9.32         <.0001
618 StockOptionLevel                  1      0.00975     0.00334
         2.92         0.0036
619 TotalWorkingYears                 1     -0.00087     0.000382
        -2.29         0.0225
620 WorkLifeBalance                   1     -0.1076      0.00681
        -15.81        <.0001
621
622
623 Step 16: Effect YearsAtCompany entered.
624
625
626                          Analysis of Variance
627
628                                     Sum of
629 Source                  DF        Squares      Mean Square
     F Value     Pr > F
630
631 Model                   16      130.207768       8.137986
     1215.31     <.0001
632 Error                  865        5.792232       0.006696
633 Corrected Total        881      136.000000
634
635
636             Model Fit Statistics
637
638 R-Square        0.9574      Adj R-Sq        0.9566
639 AIC          -4398.6448     BIC          -4396.4135
```

```
640  SBC              -4317.3475      C(p)                28.0387
641
642
643                    Analysis of Maximum Likelihood Estimates
644
645                                              Standard
646  Parameter                      DF    Estimate        Error
      t Value     Pr > |t|
647
648  Intercept                       1      1.1313       0.0353
        32.09      <.0001
649  BusinessTravel_Frequently       1      0.0564       0.00995
         5.67      <.0001
650  DistanceFromHome                1      0.00211      0.000486
         4.35      <.0001
651  EnvironmentSatisfaction         1     -0.0809       0.00554
       -14.59      <.0001
652  Gender_female                   1     -0.0182       0.00577
        -3.15      0.0017
653  JobInvolvement                  1     -0.0247       0.00400
        -6.16      <.0001
654  JobSatisfaction                 1     -0.0112       0.00266
        -4.22      <.0001
655  MaritalStatus_Married           1     -0.0677       0.00967
        -7.00      <.0001
656  NumCompaniesWorked              1      0.0279       0.00242
        11.54      <.0001
657  OverTime                        1     -0.0173       0.00634
        -2.74      0.0064
658  PercentSalaryHike               1     -0.0221       0.00157
       -14.07      <.0001
659  PerformanceRating               1      0.0648       0.00940
         6.90      <.0001
660  RelationshipSatisfaction        1     -0.0493       0.00524
        -9.40      <.0001
661  StockOptionLevel                1      0.00947      0.00332
```

```
       2.86      0.0044
662 TotalWorkingYears                    1    -0.00213    0.000502
       -4.24      <.0001
663 WorkLifeBalance                      1    -0.1070     0.00675
      -15.85      <.0001
664 YearsAtCompany                       1     0.00241    0.000632
       3.82      0.0001
665
666
667 NOTE: No (additional) effects met the 0.05 significance leve
    l for entry into the model.
668
669
670                        Summary of Stepwise Selection
671
672                      Effect                              Number
673    Step      Entered                      DF        In      F
      Value    Pr > F
674
675        1    EnvironmentSatisfaction       1         1       4
   230.65    <.0001
676        2    WorkLifeBalance               1         2
   650.39    <.0001
677        3    PercentSalaryHike             1         3
   261.07    <.0001
678        4    NumCompaniesWorked            1         4
   169.09    <.0001
679        5    RelationshipSatisfaction      1         5
   123.64    <.0001
680        6    PerformanceRating             1         6
    46.39    <.0001
681        7    MaritalStatus_Married         1         7
    47.01    <.0001
682        8    JobInvolvement                1         8
    32.79    <.0001
683        9    BusinessTravel_Frequently     1         9
```

```
      25.20    <.0001
684      10    DistanceFromHome                    1        10
      27.40    <.0001
685      11    JobSatisfaction                     1        11
      17.76    <.0001
686      12    Gender_female                       1        12
      11.49    0.0007
687      13    StockOptionLevel                    1        13
       8.07    0.0046
688      14    OverTime                            1        14
       7.65    0.0058
689      15    TotalWorkingYears                   1        15
       5.22    0.0225
690      16    YearsAtCompany                      1        16
      14.58    0.0001
691
692
693  The selected model is the model trained in the last step (St
     ep 16). It consists of the following effects:
694
695  Intercept  BusinessTravel_Frequently  DistanceFromHome   Envi
     ronmentSatisfaction  Gender_female  JobInvolvement  JobSatis
     faction  MaritalStatus_Married  NumCompaniesWorked  OverTime
       PercentSalaryHike  PerformanceRating  RelationshipSatisfac
     tion
696  StockOptionLevel  TotalWorkingYears  WorkLifeBalance  YearsA
     tCompany
697
698
699                          Analysis of Variance
700
701                                         Sum of
702  Source                    DF          Squares      Mean Square
      F Value    Pr > F
703
704  Model                     16       130.207768        8.137986
```

```
      1215.31    <.0001
705 Error                    865        5.792232         0.006696
706 Corrected Total          881      136.000000
707
708
709                  Model Fit Statistics
710
711 R-Square         0.9574    Adj R-Sq         0.9566
712 AIC          -4398.6448    BIC          -4396.4135
713 SBC          -4317.3475    C(p)             28.0387
714
715
716                  Analysis of Maximum Likelihood Estimates
717
718                                              Standard
719 Parameter                     DF     Estimate         Error
      t Value     Pr > |t|
720
721 Intercept                      1       1.1313        0.0353
        32.09        <.0001
722 BusinessTravel_Frequently      1       0.0564        0.00995
         5.67        <.0001
723 DistanceFromHome               1       0.00211       0.000486
         4.35        <.0001
724 EnvironmentSatisfaction        1      -0.0809        0.00554
       -14.59        <.0001
725 Gender_female                  1      -0.0182        0.00577
        -3.15        0.0017
726 JobInvolvement                 1      -0.0247        0.00400
        -6.16        <.0001
727 JobSatisfaction                1      -0.0112        0.00266
        -4.22        <.0001
728 MaritalStatus_Married          1      -0.0677        0.00967
        -7.00        <.0001
729 NumCompaniesWorked             1       0.0279        0.00242
        11.54        <.0001
```

```
730  OverTime                           1      -0.0173      0.00634
        -2.74       0.0064
731  PercentSalaryHike                  1      -0.0221      0.00157
       -14.07       <.0001
732  PerformanceRating                  1       0.0648      0.00940
         6.90       <.0001
733  RelationshipSatisfaction           1      -0.0493      0.00524
        -9.40       <.0001
734  StockOptionLevel                   1       0.00947     0.00332
         2.86       0.0044
735  TotalWorkingYears                  1      -0.00213     0.000502
        -4.24       <.0001
736  WorkLifeBalance                    1      -0.1070      0.00675
       -15.85       <.0001
737  YearsAtCompany                     1       0.00241     0.000632
         3.82       0.0001
738
739
740  *---------------------------------------------------------------
     -*
741  * Score Output
742  *---------------------------------------------------------------
     -*
743
744
745  *---------------------------------------------------------------
     -*
746  * Report Output
747  *---------------------------------------------------------------
     -*
748
749
750
751
752  Fit Statistics
753
```

```
754  Target=Attrition Target Label=' '
755
756    Fit
757  Statistics     Statistics Label                    Train
     Validation
758
759  _AIC_          Akaike's Information Criterion    -4398.64
          .
760  _ASE_          Average Squared Error                0.01
          0.008
761  _AVERR_        Average Error Function               0.01
          0.008
762  _DFE_          Degrees of Freedom for Error       865.00
          .
763  _DFM_          Model Degrees of Freedom            17.00
          .
764  _DFT_          Total Degrees of Freedom           882.00
          .
765  _DIV_          Divisor for ASE                    882.00
          588.000
766  _ERR_          Error Function                       5.79
          4.501
767  _FPE_          Final Prediction Error               0.01
          .
768  _MAX_          Maximum Absolute Error               0.41
          0.295
769  _MSE_          Mean Square Error                    0.01
          0.008
770  _NOBS_         Sum of Frequencies                 882.00
          588.000
771  _NW_           Number of Estimate Weights          17.00
          .
772  _RASE_         Root Average Sum of Squares          0.08
          0.087
773  _RFPE_         Root Final Prediction Error          0.08
          .
```

```
774  _RMSE_        Root Mean Squared Error              0.08
        0.087
775  _SBC_         Schwarz's Bayesian Criterion     -4317.35
          .
776  _SSE_         Sum of Squared Errors               5.79
        4.501
777  _SUMW_        Sum of Case Weights Times Freq    882.00
      588.000
778
779
780
781
782 Assessment Score Rankings
783
784 Data Role=TRAIN Target Variable=Attrition Target Label=' '
785
786              Number of      Mean         Mean
787 Depth       Observations    Target     Predicted
788
789    5            45         1.00000      1.09374
790   10            44         1.00000      1.00057
791   15            44         1.00000      0.93335
792   20            44         0.79545      0.67092
793   25            44         0.00000      0.13339
794   30            44         0.00000      0.09423
795   35            44         0.00000      0.07304
796   40            44         0.00000      0.05604
797   45            44         0.00000      0.04389
798   50            44         0.00000      0.03339
799   55            45         0.00000      0.02474
800   60            44         0.00000      0.01439
801   65            44         0.00000      0.00217
802   70            44         0.00000     -0.00905
803   75            44         0.00000     -0.01978
804   80            44         0.00000     -0.03337
805   85            44         0.00000     -0.04603
```

806	90	44	0.00000	-0.06105
807	95	44	0.00000	-0.08517
808	100	44	0.00000	-0.12665

809

810

811 Data Role=VALIDATE Target Variable=Attrition Target Label='
   '

812

813		Number of	Mean	Mean
814	Depth	Observations	Target	Predicted
815				
816	5	30	1.00000	1.12544
817	10	29	1.00000	1.01473
818	15	30	1.00000	0.92088
819	20	29	1.00000	0.81972
820	25	29	0.06897	0.18201
821	30	30	0.00000	0.10873
822	35	29	0.00000	0.08624
823	40	30	0.00000	0.07087
824	45	29	0.00000	0.05790
825	50	29	0.00000	0.04290
826	55	30	0.00000	0.02994
827	60	29	0.00000	0.01772
828	65	30	0.00000	0.00339
829	70	29	0.00000	-0.00832
830	75	29	0.00000	-0.02195
831	80	30	0.00000	-0.03578
832	85	29	0.00000	-0.05021
833	90	30	0.00000	-0.06780
834	95	29	0.00000	-0.09088
835	100	29	0.00000	-0.13815

836

837

838

839

840 Assessment Score Distribution

```
841
842  Data Role=TRAIN Target Variable=Attrition Target Label=' '
843
844     Range for        Mean        Mean        Number of
       Model
845      Predicted      Target     Predicted    Observations
       Score
846
847  1.160 -  1.231       1        1.19993          6
     1.19541
848  1.088 -  1.160       1        1.11779         13
     1.12407
849  1.017 -  1.088       1        1.05030         34
     1.05274
850  0.946 -  1.017       1        0.98328         54
     0.98140
851  0.874 -  0.946       1        0.91432         26
     0.91007
852  0.803 -  0.874       1        0.83916         22
     0.83873
853  0.732 -  0.803       1        0.78352          6
     0.76740
854  0.660 -  0.732       1        0.69030          6
     0.69606
855  0.589 -  0.660       1        0.59254          1
     0.62472
856  0.161 -  0.232       0        0.17915         10
     0.19671
857  0.090 -  0.161       0        0.11984         70
     0.12538
858  0.018 -  0.090       0        0.04822        244
     0.05404
859  -0.053 -  0.018      0        -0.01578       256        -
     0.01730
860  -0.124 -  -0.053     0        -0.08106       117        -
     0.08863
```

861 -0.196 - -0.124   0   -0.15472   17   -
    0.15997

862

863

864 Data Role=VALIDATE Target Variable=Attrition Target Label='
    '

865

866   Range for   Mean   Mean   Number of
    Model

867   Predicted   Target   Predicted   Observations
    Score

868

869	Range for Model Predicted Score	Mean Target	Mean Predicted	Number of Observations
869	1.150 - 1.18601	1	1.18606	10
870	1.077 - 1.11313	1	1.10606	14
871	1.004 - 1.04025	1	1.04234	24
872	0.931 - 0.96737	1	0.96550	23
873	0.858 - 0.89449	1	0.89428	24
874	0.785 - 0.82161	1	0.81625	18
875	0.712 - 0.74873	1	0.77321	5
876	0.639 - 0.67585	1	0.70569	2
877	0.129 - 0.16568	0	0.14388	26
878	0.056 - 0.09280	0	0.08422	108
879	-0.017 - 0.01992	0	0.01825	165
880	-0.089 - 0.05296	0	-0.04988	124

| 881 | -0.162 - 0.12585 | -0.089 | 0 | -0.11152 | 39 | - |
| 882 | -0.235 - 0.19873 | -0.162 | 0 | -0.20067 | 6 | - |