```
1  *---------------------------------------------------------------
   -*
2  User:                 mpaul
3  Date:                 April 27, 2022
4  Time:                 22:39:32
5  *---------------------------------------------------------------
   -*
6  * Training Output
7  *---------------------------------------------------------------
   -*
8
9
10
11
12  Variable Summary
13
14              Measurement     Frequency
15  Role            Level          Count
16
17  ID           INTERVAL             1
18  INPUT        BINARY              16
19  INPUT        INTERVAL            23
20  REJECTED     INTERVAL             1
21  TARGET       NOMINAL              1
22
23
24
25
26  Model Events
27
28                                              Number
29                                Measurement      of
30   Target          Event          Level       Levels      Ord
   er        Label
31
32  Attrition    NOT_ATTRITION      NOMINAL          2       Desce
```

```
     nding
33
34
35
36
37  Predicted and decision variables
38
39  Type           Variable                    Label
40
41  TARGET         Attrition
42  PREDICTED      P_AttritionNot_Attrition    Predicted: Attritio
       n=Not_Attrition
43  RESIDUAL       R_AttritionNot_Attrition    Residual: Attrition
       =Not_Attrition
44  PREDICTED      P_AttritionAttrition        Predicted: Attritio
       n=Attrition
45  RESIDUAL       R_AttritionAttrition        Residual: Attrition
       =Attrition
46  FROM           F_Attrition                 From: Attrition
47  INTO           I_Attrition                 Into: Attrition
48
49
50  *------------------------------------------------------------
     -*
51  * Score Output
52  *------------------------------------------------------------
     -*
53
54
55  *------------------------------------------------------------
     -*
56  * Report Output
57  *------------------------------------------------------------
     -*
58
59
```

```
60
61 Variable Importance
62
63
```

Variable Importance

Variable Name	Label	Number of Splitting Rules	Validation Importance	Validation Importance	Ratio of Validation to Training Importance
EducationField_Tech		1	1.0000	0.7403	0.7403
MonthlyIncome		1	0.9134	0.9712	1.0633
OverTime		1	0.8922	1.0000	1.1208
Department_Sales		1	0.6309	0.0000	0.0000
MaritalStatus_Single		1	0.5844	0.6689	1.1447

```
73
74
75
76 Tree Leaf Report
77
```

Tree Leaf Report

Node Id	Depth	Training Observations	Training Percent NOT_ATTRITION	Validation Observations	Validation Percent NOT_ATTRITION
4	2	563	0.91	393	0.91

83	19	4	124	0.90	67
				0.82	
84	3	1	77	0.53	55
				0.62	
85	10	3	57	0.44	36
				0.42	
86	25	5	38	0.79	25
				0.92	
87	24	5	22	0.36	13
				0.46	

88

89

90

91

92 Fit Statistics

93

94 Target=Attrition Target Label=' '

95

96	Fit			
97	Statistics	Statistics Label	Train	Validation
98				
99	_NOBS_	Sum of Frequencies	881.00	589.00
100	_MISC_	Misclassification Rate	0.16	0.16
101	_MAX_	Maximum Absolute Error	0.91	0.91
102	_SSE_	Sum of Squared Errors	200.37	143.23
103	_ASE_	Average Squared Error	0.11	0.12
104	_RASE_	Root Average Squared Error	0.34	0.35
105	_DIV_	Divisor for ASE	1762.00	1178.00

106   _DFT_   Total Degrees of Freedom   881.00
        .

107

108

109

110

111 Classification Table

112

113 Data Role=TRAIN Target Variable=Attrition Target Label=' '

114

115			Target	Outcome
Frequency	Total		
116 Target	Outcome	Percentage	Percentage
Count	Percentage		

117

118 ATTRITION	ATTRITION	58.2278	30.4636
46	5.2213		
119 NOT_ATTRITION	ATTRITION	41.7722	4.5205
33	3.7457		
120 ATTRITION	NOT_ATTRITION	13.0923	69.5364
105	11.9183		
121 NOT_ATTRITION	NOT_ATTRITION	86.9077	95.4795
697	79.1146		

122

123

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

125

126			Target	Outcome
Frequency	Total		
127 Target	Outcome	Percentage	Percentage
Count	Percentage		

128

129 ATTRITION	ATTRITION	57.1429	28.0000
28	4.7538		
130 NOT_ATTRITION	ATTRITION	42.8571	4.2945

```
            21            3.5654
131 ATTRITION          NOT_ATTRITION        13.3333        72.0000
            72           12.2241
132 NOT_ATTRITION      NOT_ATTRITION        86.6667        95.7055
            468          79.4567
133
134
135
136
137 Event Classification Table
138
139 Data Role=TRAIN Target=Attrition Target Label=' '
140
141   False          True          False          True
142 Negative       Negative       Positive       Positive
143
144    33            46            105            697
145
146
147 Data Role=VALIDATE Target=Attrition Target Label=' '
148
149   False          True          False          True
150 Negative       Negative       Positive       Positive
151
152    21            28            72            468
153
154
155
156
157 Assessment Score Rankings
158
159 Data Role=TRAIN Target Variable=Attrition Target Label=' '
160
161
                                      Mean
162                                Cumulative        %        Cum
```

Depth	Gain	Lift	Posterior Lift	Response	% Response	Number of Observations	Posterior Probability
5	10.1813	1.10181	1.10181	91.2966	91.2966	45	0.91297
10	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
15	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
20	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
25	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
30	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
35	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
40	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
45	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
50	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
55	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
60	10.1813	1.10181	1.10181	91.2966	91.2966	44	0.91297
65	10.1608	1.09914	1.10161	91.0753	91.2796	44	0.91075
70	10.0784	1.09006	1.10078	90.3226	91.2114	44	0.90323
75	10.0070	1.09006	1.10007	90.3226	91.1522	44	0.90323
80	9.5940	1.03390	1.09594	85.6691	90.8100	44	0.85669

Depth	Gain	Lift	Cumulative Lift	% Response	Cumulative % Response	Number of Observations	Mean Posterior Probability
181 85	7.7591	0.78359	1.07759	64.9289	89.2896	44	0.64929
182 90	5.3456	0.64261	1.05346	53.2468	87.2898	44	0.53247
183 95	2.7121	0.55249	1.02712	45.7797	85.1076	44	0.45780
184 100	0.0000	0.48409	1.00000	40.1116	82.8604	44	0.40112

185

186

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

188

189

190/191 Depth	Gain	Lift	Mean Cumulative Lift	% Response	Cumulative % Response	Number of Observations	Posterior Probability
193 5	9.10983	1.09110	1.09110	90.5852	90.5852	30	0.91297
194 10	9.10983	1.09110	1.09110	90.5852	90.5852	29	0.91297
195 15	9.10983	1.09110	1.09110	90.5852	90.5852	30	0.91297
196 20	9.10983	1.09110	1.09110	90.5852	90.5852	29	0.91297
197 25	9.10983	1.09110	1.09110	90.5852	90.5852	30	0.91297
198 30	9.10983	1.09110	1.09110	90.5852	90.5852	29	0.91297
199 35	9.10983	1.09110	1.09110	90.5852	90.5852	30	0.91297
200 40	9.10983	1.09110	1.09110	90.5852	90.5852	29	0.91297

201	45	9.10983	1.09110	1.09110	90.5852	90.5852	30	0.91297
202	50	9.10983	1.09110	1.09110	90.5852	90.5852	29	0.91297
203	55	9.10983	1.09110	1.09110	90.5852	90.5852	29	0.91297
204	60	9.10983	1.09110	1.09110	90.5852	90.5852	30	0.91297
205	65	9.10983	1.09110	1.09110	90.5852	90.5852	29	0.91297
206	70	8.61428	1.02288	1.08614	84.9214	90.1738	30	0.90647
207	75	7.97540	0.98877	1.07975	82.0896	89.6434	29	0.90323
208	80	7.70058	1.03652	1.07701	86.0537	89.4153	30	0.85772
209	85	6.71979	0.90757	1.06720	75.3480	88.6010	29	0.64768
210	90	4.89720	0.74460	1.04897	61.8182	87.0878	30	0.53247
211	95	2.45411	0.57720	1.02454	47.9206	85.0595	29	0.46773
212	100	0.00000	0.52610	1.00000	43.6782	83.0221	29	0.40499

213

214

215

216

217 Assessment Score Distribution

218

219 Data Role=TRAIN Target Variable=Attrition Target Label=' '

220

221	Posterior	Number			Mean	
222	Probability	of	Number of		Posterior	
223	Range	Events	Nonevents		Probability	Percentage

```
224
225   0.90-0.95        626           61          0.91121            77.97
      96
226   0.75-0.80         30            8          0.78947             4.31
      33
227   0.50-0.55         41           36          0.53247             8.74
      01
228   0.40-0.45         25           32          0.43860             6.46
      99
229   0.35-0.40          8           14          0.36364             2.49
      72
230
231
232   Data Role=VALIDATE Target Variable=Attrition Target Label='
      '
233
234    Posterior      Number                        Mean
235   Probability       of       Number of       Posterior
236      Range        Events     Nonevents      Probability      Percent
      age
237
238   0.90-0.95        411           49          0.91155            78.09
      85
239   0.75-0.80         23            2          0.78947             4.24
      45
240   0.50-0.55         34           21          0.53247             9.33
      79
241   0.40-0.45         15           21          0.43860             6.11
      21
242   0.35-0.40          6            7          0.36364             2.20
      71
```