

Report for Logistic Regression Model

Hotel_Logistic_Regression

Basic Summary

Call:

```
glm(formula = Reedemer ~ Customer.Segment + Income + Region + Spend + Status + Stays.Per.Year + Total.Days.Stayed + Years.Of.Loyalty, family = binomial("logit"), data = the.data)
```

Deviance Residuals:

| Min | 1Q | Median | 3Q | Max |
|-----------|-----------|-----------|-----------|----------|
| -5.804335 | -0.255751 | -0.037699 | -0.000984 | 3.300618 |

Coefficients: (1 not defined because of singularities)

| | Estimate | Std. Error | z value | Pr(> z) |
|-------------------|------------|------------|----------|----------|
| (Intercept) | -1.4971422 | 9.774e-01 | -1.53182 | 0.12557 |
| Customer.SegmentB | 0.2615413 | 7.644e-01 | 0.34216 | 0.73223 |
| Customer.SegmentC | 0.0293975 | 7.820e-01 | 0.03759 | 0.97001 |
| Customer.SegmentD | 0.6212131 | 8.894e-01 | 0.69844 | 0.4849 |
| Customer.SegmentE | 1.3410276 | 8.224e-01 | 1.63064 | 0.10297 |
| Customer.SegmentF | 1.2418209 | 9.332e-01 | 1.33074 | 0.18327 |
| Customer.SegmentG | 0.3885387 | 9.542e-01 | 0.40717 | 0.68388 |
| Customer.SegmentH | 0.8179481 | 8.517e-01 | 0.96038 | 0.33687 |
| Customer.SegmentI | 0.4799675 | 9.279e-01 | 0.51726 | 0.60498 |
| Customer.SegmentJ | 0.6538990 | 8.698e-01 | 0.75177 | 0.45219 |
| Customer.SegmentK | 1.6315789 | 9.518e-01 | 1.71417 | 0.0865 |
| Customer.SegmentL | 0.5574539 | 9.515e-01 | 0.58586 | 0.55797 |
| Customer.SegmentM | 0.6815437 | 1.505e+00 | 0.45298 | 0.65056 |
| Customer.SegmentN | 0.5995350 | 1.644e+00 | 0.36461 | 0.7154 |
| Customer.SegmentO | 0.9748227 | 8.218e-01 | 1.18626 | 0.23552 |
| Customer.SegmentP | 1.0668890 | 8.930e-01 | 1.19472 | 0.2322 |
| Customer.SegmentQ | 0.9556431 | 8.638e-01 | 1.10629 | 0.2686 |
| Customer.SegmentR | 2.2443070 | 1.396e+00 | 1.60747 | 0.10795 |
| Customer.SegmentS | 1.6037178 | 1.273e+00 | 1.26010 | 0.20763 |
| Customer.SegmentU | -0.1534655 | 9.671e-01 | -0.15868 | 0.87392 |
| IncomeB | -0.2733215 | 5.763e-01 | -0.47427 | 0.63531 |
| IncomeC | -0.1347527 | 5.501e-01 | -0.24495 | 0.8065 |
| IncomeD | -0.2103277 | 4.817e-01 | -0.43659 | 0.66241 |
| IncomeE | 0.0434995 | 4.821e-01 | 0.09022 | 0.92811 |
| IncomeF | 0.1290160 | 4.943e-01 | 0.26099 | 0.7941 |
| IncomeG | -0.3273187 | 5.596e-01 | -0.58495 | 0.55858 |
| IncomeH | 0.5428112 | 6.878e-01 | 0.78915 | 0.43002 |
| IncomeI | 0.1388889 | 6.307e-01 | 0.22020 | 0.82572 |
| IncomeJ | 0.6010668 | 9.881e-01 | 0.60831 | 0.54298 |
| IncomeK | 0.1646344 | 9.185e-01 | 0.17924 | 0.85775 |
| IncomeL | 2.5296648 | 1.368e+00 | 1.84870 | 0.0645 |
| Region10 | -0.2153912 | 4.870e-01 | -0.44231 | 0.65826 |
| Region2 | 1.3727398 | 7.599e-01 | 1.80652 | 0.07084 |
| Region3 | -0.8981264 | 5.689e-01 | -1.57873 | 0.1144 |
| Region4 | -0.9328083 | 5.293e-01 | -1.76228 | 0.07802 |

| Record | Report |
|-------------------|---|
| | Estimate Std. Error z value Pr(> z) |
| Region5 | -1.1790216 5.289e-01 -2.22899 0.02581 * |
| Region6 | 0.2518505 4.973e-01 0.50648 0.61252 |
| Region7 | 0.6530861 5.244e-01 1.24531 0.21302 |
| Region8 | 0.1270996 5.165e-01 0.24608 0.80562 |
| Region9 | 0.3869333 5.767e-01 0.67098 0.50223 |
| Spend | 0.0008755 7.422e-05 11.79606 < 2.2e-16 *** |
| StatusGold | 0.9062050 3.418e-01 2.65147 0.00801 ** |
| StatusPlatinum | 1.8040814 1.235e+00 1.46062 0.14412 |
| StatusSilver | 0.3959968 3.147e-01 1.25821 0.20832 |
| Stays.Per.Year | -1.6416288 1.911e-01 -8.58911 < 2.2e-16 *** |
| Total.Days.Stayed | -0.0745563 4.734e-02 -1.57494 0.11527 |
| Years.Of.Loyalty | 0.1024637 9.838e-02 1.04155 0.29762 |
| IncomeU | NA NA NA NA |

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial taken to be 1)

8 Null deviance: 1377.7 on 1593 degrees of freedom
Residual deviance: 517.62 on 1546 degrees of freedom
McFadden **R-Squared: 0.6243**, Akaike Information Criterion 611.6
9 Number of Fisher Scoring iterations: 9
10 *Type II Analysis of Deviance Tests*