Logistic Regression Report

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Call:
glm(formula = rating ~ genre + gender + occupation, family = binomial(link = "logit"),
    data = movieRawData)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.8846   0.2762   0.3118   0.3548   0.8171

Coefficients:
                          Estimate Std. Error z value Pr(>|z|)
(Intercept)               2.93299    0.04843  60.559  < 2e-16 ***
genreAdventure            0.03884    0.04497   0.864 0.387764
genreAnimation            0.17702    0.08019   2.208 0.027269 *
genreChildren's          -0.26956    0.05118  -5.267 1.39e-07 ***
genreComedy              -0.24729    0.03430  -7.210 5.59e-13 ***
genreCrime                0.18509    0.05693   3.251 0.001150 **
genreDocumentary         -0.18914    0.14000  -1.351 0.176676
genreDrama                0.36011    0.03598  10.008  < 2e-16 ***
genreFantasy             -0.31431    0.10298  -3.052 0.002273 **
genreFilm-Noir            0.90817    0.15390   5.901 3.61e-09 ***
genreHorror              -0.46936    0.05384  -8.718  < 2e-16 ***
genreMusical              0.05623    0.06685   0.841 0.400270
genreMystery              0.25390    0.06956   3.650 0.000262 ***
genreRomance              0.24799    0.04266   5.814 6.11e-09 ***
genreSci-Fi               0.05438    0.04647   1.170 0.241835
genreThriller             0.08449    0.03937   2.146 0.031879 *
genreunknown             -1.30519    0.80015  -1.631 0.102851
genreWar                  0.45731    0.05966   7.665 1.78e-14 ***
genreWestern              0.47234    0.12441   3.797 0.000147 ***
genderM                   0.10069    0.02320   4.339 1.43e-05 ***
occupationartist         -0.39655    0.06946  -5.709 1.14e-08 ***
occupationdoctor          0.55044    0.19559   2.814 0.004889 **
occupationeducator       -0.03310    0.05199  -0.637 0.524367
occupationengineer        0.01580    0.05425   0.291 0.770892
occupationentertainment -0.59495    0.06901  -8.622  < 2e-16 ***
occupationexecutive      -1.07780    0.05424 -19.872  < 2e-16 ***
occupationhealthcare     -1.53811    0.05320 -28.910  < 2e-16 ***
occupationhomemaker      -0.66575    0.14253  -4.671 3.00e-06 ***
occupationlawyer         -0.05416    0.09976  -0.543 0.587181
occupationlibrarian       0.07034    0.06213   1.132 0.257546
occupationmarketing       0.04271    0.08651   0.494 0.621492
occupationnone            0.12534    0.12004   1.044 0.296392
occupationother          -0.14332    0.04907  -2.921 0.003493 **
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occupationprogrammer    -0.19533    0.05224  -3.739 0.000184 ***
occupationretired        0.47124    0.11514   4.093 4.26e-05 ***
occupationsalesman      -0.56891    0.09690  -5.871 4.33e-09 ***
occupationscientist      0.20295    0.09007   2.253 0.024233 *
occupationstudent       -0.26275    0.04346  -6.046 1.48e-09 ***
occupationtechnician    -0.03407    0.06780  -0.502 0.615349
occupationwriter        -0.65989    0.05125 -12.877  < 2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 93846  on 213547  degrees of freedom
Residual deviance: 91062  on 213508  degrees of freedom
AIC: 91142

Number of Fisher Scoring iterations: 6

[1] "GLM Done"
Analysis of Deviance Table

Model: binomial, link: logit

Response: rating

Terms added sequentially (first to last)


           Df Deviance Resid. Df Resid. Dev  Pr(>Chi)
NULL                     213547      93846
genre      18   697.63    213529      93149 < 2.2e-16 ***
gender      1   175.39    213528      92973 < 2.2e-16 ***
occupation 20  1910.93    213508      91062 < 2.2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
[1] "Anova Done"
```

Association Rule Mining Report

Apriori

Parameter specification:
 confidence minval smax arem aval originalSupport support minlen maxlen target   ext
        0.8   0.1   1 none FALSE   TRUE   0.005   2   10 rules FALSE

Algorithmic control:
 filter tree heap memopt load sort verbose
    0.1 TRUE TRUE FALSE TRUE   2   TRUE

Absolute minimum support count: 1067

set item appearances ...[0 item(s)] done [0.00s].
set transactions ...[213595 item(s), 213549 transaction(s)] done [0.18s].
sorting and recoding items ... [86 item(s)] done [0.04s].
creating transaction tree ... done [0.18s].
checking subsets of size 1 2 3 4 done [0.01s].
writing ... [138 rule(s)] done [0.00s].
creating S4 object ... done [0.04s].
    lhs   rhs   support   confidence lift
4   {17}   => {student} 0.009178221 0.9683794 4.310864
31 {17,M}   => {student} 0.008119916 0.9649416 4.295560
131 {19,3,M}   => {student} 0.008119916 0.9548458 4.250617
66 {19,3}   => {student} 0.009875954 0.9365009 4.168953
133 {19,4,M}   => {student} 0.009693326 0.9349593 4.162090
94 {20,F}   => {student} 0.010367644 0.9073770 4.039304
69 {19,M}   => {student} 0.025769261 0.9042064 4.025190
67 {19,4}   => {student} 0.011397852 0.9008142 4.010089
48 {22,healthcare}   => {F}   0.006312369 1.0000000 3.957176
60 {35,educator}   => {F}   0.007080342 1.0000000 3.957176
21 {19}   => {student} 0.031337070 0.8802947 3.918743
91 {20,Comedy}   => {student} 0.005155725 0.8724247 3.883709
95 {20,3}   => {student} 0.008480489 0.8690019 3.868472
134 {20,3,M}   => {student} 0.006218713 0.8573273 3.816501
109 {27,other}   => {F}   0.010348913 0.9629630 3.810614
92 {20,Drama}   => {student} 0.005853458 0.8509190 3.787974
26 {20}   => {student} 0.035195669 0.8429789 3.752628
93 {20,5}   => {student} 0.009679277 0.8264694 3.679134
43 {18,M}   => {student} 0.009431091 0.8207009 3.653454
96 {20,4}   => {student} 0.011477460 0.8194584 3.647923
97 {20,M}   => {student} 0.024828025 0.8187153 3.644615
50 {3,healthcare}   => {F}   0.006420072 0.8510242 3.367653
49 {Drama,healthcare}   => {F}   0.005066753 0.8291188 3.280969

17 {healthcare}   => {F}   0.021105226 0.8087206 3.200250
1   {doctor}   => {M}   0.005254063 1.0000000 1.338169
9   {60}   => {M}   0.015003582 1.0000000 1.338169
32 {43,engineer}   => {M}   0.005530347 1.0000000 1.338169
33 {60,retired}   => {M}   0.009271877 1.0000000 1.338169
34 {4,60}   => {M}   0.005666147 1.0000000 1.338169
36 {47,educator}   => {M}   0.008517951 1.0000000 1.338169
45 {39,educator}   => {M}   0.006363879 1.0000000 1.338169
51 {23,programmer}   => {M}   0.007277018 1.0000000 1.338169
61 {26,other}   => {M}   0.005890920 1.0000000 1.338169
76 {24,technician}   => {M}   0.009543477 1.0000000 1.338169
81 {29,engineer}   => {M}   0.005577174 1.0000000 1.338169
83 {22,engineer}   => {M}   0.006106327 1.0000000 1.338169
85 {25,programmer}   => {M}   0.007103756 1.0000000 1.338169
98 {24,engineer}   => {M}   0.010035168 1.0000000 1.338169
108 {27,programmer}   => {M}   0.010456617 1.0000000 1.338169
127 {3,engineer}   => {M}   0.024355066 0.9884074 1.322656
122 {2,engineer}   => {M}   0.009239097 0.9874875 1.321425
126 {5,engineer}   => {M}   0.017597835 0.9860929 1.319559
121 {engineer,Thriller}   => {M}   0.007918557 0.9854312 1.318673
124 {Comedy,engineer}   => {M}   0.011257370 0.9844390 1.317346
106 {Adventure,engineer} => {M}   0.005998623 0.9831159 1.315575
102 {engineer,Sci-Fi}   => {M}   0.005638050 0.9828571 1.315229
123 {Action,engineer}   => {M}   0.010475348 0.9815709 1.313508
29 {engineer}   => {M}   0.081798557 0.9812381 1.313062
80 {4,technician}   => {M}   0.013369297 0.9810997 1.312877
125 {Drama,engineer}   => {M}   0.014530623 0.9797916 1.311127
7   {34}   => {M}   0.012573227 0.9792123 1.310351
77 {Drama,technician}   => {M}   0.006007989 0.9756654 1.305605
120 {engineer,Romance}   => {M}   0.006747866 0.9756263 1.305553
136 {4,Drama,engineer}   => {M}   0.005122946 0.9741763 1.303612
24 {technician}   => {M}   0.035102014 0.9691015 1.296821
128 {4,engineer}   => {M}   0.027085119 0.9683576 1.295826
79 {3,technician}   => {M}   0.009880636 0.9678899 1.295200
35 {4,retired}   => {M}   0.006092279 0.9601476 1.284840
78 {5,technician}   => {M}   0.006363879 0.9570423 1.280684
10 {retired}   => {M}   0.014558720 0.9569098 1.280507
115 {Comedy,programmer}   => {M}   0.010845286 0.9566295 1.280132
105 {Adventure,programmer} => {M}   0.005544395 0.9533011 1.275678
118 {3,programmer}   => {M}   0.018927740 0.9508351 1.272378
116 {Drama,programmer}   => {M}   0.012512351 0.9485268 1.269289
119 {4,programmer}   => {M}   0.027145995 0.9459856 1.265889
52 {23,engineer}   => {M}   0.005380498 0.9456790 1.265478
114 {Action,programmer}   => {M}   0.010273989 0.9444684 1.263858
28 {programmer}   => {M}   0.075378485 0.9430547 1.261966
39 {4,scientist}   => {M}   0.007604812 0.9414493 1.259818

101 {programmer,Sci-Fi}   => {M}   0.005141677 0.9408740 1.259048
8   {lawyer}   => {M}   0.012156461 0.9405797 1.258654
117 {5,programmer}   => {M}   0.017274724 0.9374841 1.254512
56 {Drama,executive}   => {M}   0.006199982 0.9356890 1.252110
111 {programmer,Romance} => {M}   0.006185934 0.9355524 1.251927
19 {executive}   => {M}   0.030704897 0.9352446 1.251515
63 {26,student}   => {M}   0.009632450 0.9316123 1.246655
38 {3,scientist}   => {M}   0.005703609 0.9311927 1.246093
58 {3,executive}   => {M}   0.006864935 0.9307937 1.245559
14 {scientist}   => {M}   0.019850245 0.9306257 1.245334
59 {4,executive}   => {M}   0.009543477 0.9305936 1.245291
11 {47}   => {M}   0.014362043 0.9305218 1.245195
3   {55}   => {M}   0.006326417 0.9291609 1.243374
113 {2,programmer}   => {M}   0.008087137 0.9289941 1.243151
112 {programmer,Thriller} => {M}   0.007586081 0.9262436 1.239470
6   {57}   => {M}   0.008967497 0.9242278 1.236773
57 {5,executive}   => {M}   0.007230191 0.9212411 1.232776
86 {25,Action}   => {M}   0.005469471 0.9182390 1.228759
37 {4,entertainment}   => {M}   0.005614636 0.9110942 1.219198
110 {27,student}   => {M}   0.014338630 0.9059172 1.212270
89 {25,3}   => {M}   0.009875954 0.9008971 1.205552
41 {3,51}   => {M}   0.005577174 0.8941441 1.196516
75 {32,4}   => {M}   0.012198605 0.8915127 1.192994
13 {entertainment}   => {M}   0.018365808 0.8905540 1.191712
88 {25,student}   => {M}   0.008995594 0.8901761 1.191206
5   {17}   => {M}   0.008414931 0.8878458 1.188088
30 {17,student}   => {M}   0.008119916 0.8846939 1.183870
135 {27,4,student}   => {M}   0.005094849 0.8838343 1.182720
54 {23,4}   => {M}   0.007178680 0.8810345 1.178973
2   {52}   => {M}   0.005277477 0.8702703 1.164569
74 {3,32}   => {M}   0.008428979 0.8695652 1.163625
23 {32}   => {M}   0.031079518 0.8664491 1.159455
72 {32,Drama}   => {M}   0.006031403 0.8621151 1.153656
25 {25}   => {M}   0.035720139 0.8600744 1.150925
90 {25,4}   => {M}   0.011908274 0.8579622 1.148098
53 {23,3}   => {M}   0.006864935 0.8543124 1.143214
46 {3,39}   => {M}   0.006480948 0.8527418 1.141113
132 {19,4,student}   => {M}   0.009693326 0.8504519 1.138048
15 {51}   => {M}   0.018525022 0.8474722 1.134061
73 {32,5}   => {M}   0.006349831 0.8469706 1.133390
42 {4,51}   => {M}   0.007150584 0.8464523 1.132696
55 {3,33}   => {M}   0.006007989 0.8451910 1.131008
47 {39,4}   => {M}   0.007787440 0.8420253 1.126772
16 {39}   => {M}   0.021297220 0.8372607 1.120396
40 {51,administrator}   => {M}   0.005483519 0.8370264 1.120083
12 {42}   => {M}   0.014034250 0.8364499 1.119311

18 {23}   => {M}   0.022421084 0.8357479 1.118372
64 {26,3}   => {M}   0.007361308 0.8339523 1.115969
20 {26}   => {M}   0.028948860 0.8306907 1.111604
99 {24,student}   => {M}   0.007380039 0.8294737 1.109976
137 {3,Action,student} => {M}   0.007042880 0.8227571 1.100988
68 {19,student}   => {M}   0.025769261 0.8223252 1.100410
130 {19,3,student}   => {M}   0.008119916 0.8221906 1.100230
71 {19,4}   => {M}   0.010367644 0.8193930 1.096486
65 {26,4}   => {M}   0.009491967 0.8153660 1.091097
138 {4,Action,student} => {M}   0.008105868 0.8149718 1.090570
44 {36,engineer}   => {M}   0.005441374 0.8125874 1.087379
62 {26,Drama}   => {M}   0.005048022 0.8117470 1.086255
100 {24,3}   => {M}   0.010775045 0.8099261 1.083818
84 {22,4}   => {M}   0.010316134 0.8093314 1.083022
107 {2,Adventure}   => {M}   0.006485631 0.8071096 1.080049
70 {19,3}   => {M}   0.008503903 0.8063943 1.079092
104 {4,Sci-Fi}   => {M}   0.016183639 0.8063462 1.079027
82 {Crime,student}   => {M}   0.006986687 0.8060508 1.078632
87 {25,Drama}   => {M}   0.005296208 0.8044097 1.076436
27 {24}   => {M}   0.036886148 0.8036935 1.075478
103 {Sci-Fi,student}   => {M}   0.011543018 0.8024089 1.073759
22 {19}   => {M}   0.028499314 0.8005788 1.071310
129 {2,Action}   => {M}   0.012273530 0.8003053 1.070944
set of 138 rules