## Algorithm 2

```
library(caret)
## Warning: package 'caret' was built under R version 3.5.3
## Loading required package: lattice
## Loading required package: ggplot2
## Warning: package 'ggplot2' was built under R version 3.5.3
library(ranger)
## Warning: package 'ranger' was built under R version 3.5.3
library(tidyverse)
## Warning: package 'tidyverse' was built under R version 3.5.3
## -- Attaching packages ----- tidyverse 1.2.1 --
## v tibble 1.4.2 v purrr 0.2.5
## v tidyr 0.8.1 v dplyr 0.7.6
## v readr 1.1.1 v stringr 1.4.0
## v tibble 1.4.2 v forcats 0.3.0
## Warning: package 'stringr' was built under R version 3.5.3
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag() masks stats::lag()
## x purrr::lift() masks caret::lift()
library(e1071)
## Warning: package 'e1071' was built under R version 3.5.3
library(readxl)
redwine <- read_excel("C:/Users/sarah/Desktop/info8000/winequalityred.xlsx",</pre>
    |Wulne <- read_excel( C://users/Saran//usakcup/inco.
col_types = c("numeric", "numeric",
    "numeric", "numeric",
    "numeric", "numeric",
    "numeric", "numeric",
    "numeric", "numeric",
    "numeric", "numeric")</pre>
red2<-redwine%>%
  select(-fixedacidity)%>%
  select(-residualsugar)%>%
  select(-freesulfurdioxide)%>%
  select(-pH)
set.seed(65468)
inTraining<-createDataPartition(red2$quality,p=.75,list = FALSE)</pre>
training<-red2[inTraining,]</pre>
testing<-red2[-inTraining,]
fitControl<-trainControl(## 10-fold CV
  method = "cv",
  number=10,
  ##repeated ten times
  repeats = 10)
## Warning: `repeats` has no meaning for this resampling method.
gbmFit2<- train(quality ~.,data=training,</pre>
                   method="gbm",
                   trControl = fitControl)
```

| ##                                     | Iter  | TrainDeviance  | ValidDeviance  | StepSize   | Improve  |
|--|---|--|--|--|--|
| ##                                     | 1   | 0.6433   | nan  | 0.1000   | 0.0221   |
| ##                                     | 2   |  | nan  | 0.1000   | 0.0162   |
| ##                                     | 3<br>4  |  | nan  | 0.1000   | 0.0129   |
| ##                                     | 5   | 0.5937<br>0.5809   | nan<br>nan   | 0.1000<br>0.1000   | 0.0110<br>0.0127   |
| ##                                     | 6   |  | nan  | 0.1000   | 0.0029   |
| ##                                     | 7   |  | nan  | 0.1000   | 0.0093   |
| ##                                     | 8   | 0.5481   | nan  | 0.1000   | 0.0065   |
| ##                                     | 9   | 0.5370   | nan  | 0.1000   | 0.0093   |
| ##                                     | 10  | 0.5261   | nan  | 0.1000   | 0.0088   |
| ##                                     | 20<br>40  | 0.4668<br>0.4181   | nan<br>nan   | 0.1000<br>0.1000   | 0.0055<br>0.0008   |
| ##                                     | 60  | 0.3985   | nan  | 0.1000   | -0.0001  |
| ##                                     | 80  | 0.3893   | nan  | 0.1000   | -0.0002  |
| ##                                     | 100   | 0.3826   | nan  | 0.1000   | -0.0003  |
| ##                                     | 120   | 0.3777   | nan  | 0.1000   | -0.0004  |
| ##                                     | 140   | 0.3738   | nan  | 0.1000   | -0.0006  |
| ##                                     | 150   | 0.3724   | nan  | 0.1000   | -0.0005  |
|  | Iter  | TrainDeviance  | ValidDeviance  | StepSize   | Improve  |
| ##                                     | 1   | 0.6337   | nan  | 0.1000   | 0.0286   |
| ##                                     | 2   |  | nan  | 0.1000   | 0.0212   |
| ##                                     | 3   | 0.5847   | nan  | 0.1000   | 0.0247   |
| ##                                     | 4   |  | nan  | 0.1000   | 0.0118   |
| ##<br>##                               | 5<br>6  | 0.5501<br>0.5368   | nan<br>nan   | 0.1000<br>0.1000   | 0.0172<br>0.0112   |
| ##                                     | 7   |  | nan  | 0.1000   | 0.0112   |
| ##                                     | 8   |  | nan  | 0.1000   | 0.0139   |
| ##                                     | 9   | 0.4945   | nan  | 0.1000   | 0.0102   |
| ##                                     | 10  | 0.4845   | nan  | 0.1000   | 0.0079   |
| ##<br>##                               | 20<br>40  | 0.4175<br>0.3780   | nan  | 0.1000<br>0.1000   | 0.0021<br>-0.0005  |
| ##                                     | 60  | 0.3644   | nan<br>nan   | 0.1000   | -0.0003  |
| ##                                     | 80  | 0.3527   | nan  | 0.1000   | -0.0008  |
| ##                                     | 100   | 0.3418   | nan  | 0.1000   | -0.0001  |
| ##                                     | 120   | 0.3350   | nan  | 0.1000   | -0.0005  |
| ##                                     | 140   | 0.3284   | nan  | 0.1000   | -0.0009  |
| ##                                     | 150   | 0.3243   | nan  | 0.1000   | -0.0011  |
|  | Iter  | TrainDeviance  | ValidDeviance  | StepSize   | Improve  |
| ##                                     | 1   | 0.6296   | nan  | 0.1000   | 0.0335   |
| ##                                     | 2   |  | nan  | 0.1000   | 0.0292   |
| ##                                     | 3   |  | nan  | 0.1000   | 0.0226   |
| ##                                     | 4<br>5  | 0.5502<br>0.5273   | nan<br>nan   | 0.1000<br>0.1000   | 0.0208<br>0.0211   |
| ##                                     | 6   |  | nan  | 0.1000   | 0.0113   |
| ##                                     | 7   |  | nan  | 0.1000   | 0.0137   |
| ##                                     | 8   | 0.4848   | nan  | 0.1000   | 0.0131   |
| ##                                     | 9   | 0.4740   | nan  | 0.1000   | 0.0088   |
| ##                                     | 10  | 0.4618   | nan  | 0.1000   | 0.0086   |
| ##                                     | 20<br>40  | 0.3955   | nan  | 0.1000   | 0.0017   |
| ##                                     | 40<br>60  | 0.3588<br>0.3405   | nan<br>nan   | 0.1000<br>0.1000   | 0.0001<br>-0.0005  |
| ##                                     | 80  | 0.3269   | nan  | 0.1000   | -0.0008  |
| ##                                     | 100   | 0.3118   | nan  | 0.1000   | -0.0002  |
| ##                                     | 120   | 0.3001   | nan  | 0.1000   | -0.0009  |
| ##                                     | 140   | 0.2899   | nan  | 0.1000   | -0.0015  |
| ##                                     | 150   | 0.2852   | nan  | 0.1000   | -0.0012  |
| ##                                     | Iter  | TrainDeviance  | ValidDeviance  | StepSize   | Improve  |
| ##                                     | 1 ter   |  | nan  | 0.1000   | 0.0209   |
| ##                                     | 2   |  | nan  | 0.1000   | 0.0153   |
| ##                                     | 3   |  | nan  | 0.1000   | 0.0141   |
| ##                                     | 4   |  | nan  | 0.1000   | 0.0132   |
| ##                                     | 5<br>6  |  | nan<br>nan   | 0.1000<br>0.1000   | 0.0106<br>0.0130   |
| ##                                     | 7   |  | nan  | 0.1000   | 0.0092   |
| ##                                     | 8   |  | nan  | 0.1000   | 0.0032   |
| ##                                     | 9   | 0.5360   | nan  | 0.1000   | 0.0082   |
| ##                                     | 10  | 0.5273   | nan  | 0.1000   | 0.0076   |
| ##                                     | 20  | 0.4680   | nan  | 0.1000   | 0.0038   |
| ##                                     | 40<br>60  | 0.4204<br>0.4009   | nan<br>nan   | 0.1000<br>0.1000   | -0.0004<br>-0.0003   |
| ##                                     | 80  | 0.3909   | nan  | 0.1000   | 0.0001   |
| ##                                     | 100   | 0.3837   | nan  | 0.1000   | -0.0009  |
| ##                                     | 120   | 0.3792   | nan  | 0.1000   | -0.0010  |
|  | 140   | 0.3758   | nan  | 0.1000   | -0.0007  |
| ##                                     | 150   | 0.3740   | nan  | 0.1000   | -0.0005  |
| ##                                     |   | TrainDeviance  | ValidDeviance  | StepSize   | Improve  |
| ##<br>##                               | Tter  |  | nan  | 0.1000   | 0.0280   |
| ##<br>##<br>##                         | Iter<br>1   |  |  | 0.1000   | 0.0262   |
| ##<br>##                               | Iter<br>1<br>2  | 0.6343   | nan  |  | 0.0212   |
| ##<br>##<br>##<br>##                   | 1   | 0.6343<br>0.6075   | nan<br>nan   | 0.1000   |  |
| ##<br>##<br>##<br>##                   | 1<br>2  | 0.6343<br>0.6075<br>0.5845   |  | 0.1000<br>0.1000   | 0.0172   |
| ##<br>##<br>##<br>##<br>##             | 1<br>2<br>3   | 0.6343<br>0.6075<br>0.5845<br>0.5664<br>0.5491   | nan  | 0.1000<br>0.1000   | 0.0156   |
| ##<br>##<br>##<br>##<br>##<br>##<br>## | 1<br>2<br>3<br>4<br>5   | 0.6343<br>0.6075<br>0.5845<br>0.5664<br>0.5491<br>0.5339   | nan<br>nan<br>nan<br>nan                             | 0.1000<br>0.1000<br>0.1000   | 0.0156<br>0.0105   |
| ##<br>##<br>##<br>##<br>##<br>##<br>## | 1<br>2<br>3<br>4<br>5<br>6<br>7                                   | 0.6343<br>0.6075<br>0.5845<br>0.5664<br>0.5491<br>0.5339<br>0.5194   | nan<br>nan<br>nan<br>nan<br>nan                      | 0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0156<br>0.0105<br>0.0127   |
| ##<br>##<br>##<br>##<br>##<br>##<br>## | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8                              | 0.6343<br>0.6075<br>0.5845<br>0.5664<br>0.5491<br>0.5339<br>0.5194<br>0.5070   | nan<br>nan<br>nan<br>nan<br>nan<br>nan               | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0156<br>0.0105<br>0.0127<br>0.0112   |
| ##<br>##<br>##<br>##<br>##<br>##<br>## | 1<br>2<br>3<br>4<br>5<br>6<br>7                                   | 0.6343<br>0.6075<br>0.5845<br>0.5664<br>0.5491<br>0.5339<br>0.5194<br>0.5070   | nan<br>nan<br>nan<br>nan<br>nan                      | 0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0156<br>0.0105<br>0.0127   |
| ## ## ## ## ## ## ## ## ## ## ## ## ## | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>20             | 0.6343<br>0.6075<br>0.5845<br>0.5664<br>0.5491<br>0.5339<br>0.5194<br>0.5070<br>0.4952<br>0.4837                     | nan<br>nan<br>nan<br>nan<br>nan<br>nan               | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000                     | 0.0156<br>0.0105<br>0.0127<br>0.0112<br>0.0095<br>0.0104<br>0.0039                       |
| ## ## ## ## ## ## ## ## ## ## ## ## ## | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>20<br>40       | 0.6343<br>0.6075<br>0.5845<br>0.5664<br>0.5491<br>0.5339<br>0.5194<br>0.5070<br>0.4952<br>0.4837<br>0.4232           | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000           | 0.0156<br>0.0105<br>0.0127<br>0.0112<br>0.0095<br>0.0104<br>0.0039<br>-0.0011            |
| ###################################### | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60 | 0.6343<br>0.6075<br>0.5845<br>0.5664<br>0.5491<br>0.5339<br>0.5194<br>0.5970<br>0.4952<br>0.4837<br>0.4232<br>0.3846 | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000 | 0.0156<br>0.0105<br>0.0127<br>0.0112<br>0.0095<br>0.0104<br>0.0039<br>-0.0011<br>-0.0016 |
| ## ## ## ## ## ## ## ## ## ## ## ## ## | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>20<br>40       | 0.6343<br>0.6075<br>0.5845<br>0.5664<br>0.5491<br>0.5339<br>0.5194<br>0.5070<br>0.4952<br>0.4837<br>0.4232           | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000           | 0.0156<br>0.0105<br>0.0127<br>0.0112<br>0.0095<br>0.0104<br>0.0039<br>-0.0011            |

| ## | 120      | 0.3381        | nan           | 0.1000   | -0.0011 |
|----|----------|---------------|---------------|----------|---------|
| ## | 140      | 0.3283        | nan           | 0.1000   | -0.0009 |
| ## | 150      | 0.3252        | nan           | 0.1000   | -0.0005 |
| ## |          |               |               |          |         |
| ## | Iter     | TrainDeviance | ValidDeviance | StepSize | Improve |
| ## | 1        | 0.6271        | nan           | 0.1000   | 0.0333  |
| ## | 2        | 0.5986        | nan           | 0.1000   | 0.0255  |
| ## | 3        | 0.5712        |               | 0.1000   | 0.0235  |
| ## | 4        |               | nan           |          |         |
|    |          | 0.5470        | nan           | 0.1000   | 0.0202  |
| ## | 5        | 0.5269        | nan           | 0.1000   | 0.0160  |
| ## | 6        | 0.5098        | nan           | 0.1000   | 0.0154  |
| ## | 7        | 0.4937        | nan           | 0.1000   | 0.0117  |
| ## | 8        | 0.4818        | nan           | 0.1000   | 0.0098  |
| ## | 9        | 0.4692        | nan           | 0.1000   | 0.0110  |
| ## | 10       | 0.4580        | nan           | 0.1000   | 0.0108  |
| ## | 20       | 0.3969        | nan           | 0.1000   | 0.0002  |
| ## | 40       | 0.3560        | nan           | 0.1000   | -0.0009 |
| ## | 60       | 0.3359        | nan           | 0.1000   | -0.0016 |
| ## | 80       | 0.3218        | nan           | 0.1000   | -0.0012 |
| ## | 100      | 0.3096        | nan           | 0.1000   | -0.0008 |
| ## | 120      | 0.3007        | nan           | 0.1000   | -0.0016 |
| ## | 140      | 0.2891        | nan           | 0.1000   | -0.0005 |
| ## | 150      | 0.2848        | nan           | 0.1000   | -0.0003 |
| ## | 250      | 012010        |               | 0.1000   | 0.0003  |
| ## | Iter     | TrainDeviance | ValidDeviance | StepSize | Improve |
| ## | 1        | 0.6535        | nan           | 0.1000   | 0.0182  |
| ## | 2        | 0.6343        | nan           | 0.1000   | 0.0179  |
|    |          |               |               |          |         |
| ## | 3        | 0.6171        | nan           | 0.1000   | 0.0144  |
| ## | 4        | 0.6040        | nan           | 0.1000   | 0.0115  |
| ## | 5        | 0.5916        | nan           | 0.1000   | 0.0115  |
| ## | 6        | 0.5796        | nan           | 0.1000   | 0.0115  |
| ## | 7        | 0.5672        | nan           | 0.1000   | 0.0120  |
| ## | 8        | 0.5558        | nan           | 0.1000   | 0.0075  |
| ## | 9        | 0.5448        | nan           | 0.1000   | 0.0090  |
| ## | 10       | 0.5355        | nan           | 0.1000   | 0.0077  |
| ## | 20       | 0.4770        | nan           | 0.1000   | 0.0031  |
| ## | 40       | 0.4322        | nan           | 0.1000   | 0.0000  |
| ## | 60       | 0.4156        | nan           | 0.1000   | -0.0006 |
| ## | 80       | 0.4062        | nan           | 0.1000   | -0.0006 |
| ## | 100      | 0.4009        | nan           | 0.1000   | 0.0001  |
| ## | 120      | 0.3966        | nan           | 0.1000   | -0.0004 |
| ## | 140      | 0.3933        | nan           | 0.1000   | -0.0003 |
| ## | 150      | 0.3914        | nan           | 0.1000   | -0.0004 |
| ## |          |               |               |          |         |
| ## | Iter     | TrainDeviance | ValidDeviance | StepSize | Improve |
| ## | 1        | 0.6408        | nan           | 0.1000   | 0.0264  |
| ## | 2        | 0.6147        | nan           | 0.1000   | 0.0241  |
| ## | 3        | 0.5902        | nan           | 0.1000   | 0.0215  |
| ## | 4        | 0.5713        | nan           | 0.1000   | 0.0174  |
| ## |          |               |               |          |         |
|    | 5        | 0.5534        | nan           | 0.1000   | 0.0145  |
| ## | 6        | 0.5386        | nan           | 0.1000   | 0.0117  |
| ## | 7        | 0.5229        | nan           | 0.1000   | 0.0142  |
| ## | 8        | 0.5109        | nan           | 0.1000   | 0.0116  |
| ## | 9        | 0.4987        | nan           | 0.1000   | 0.0078  |
| ## | 10       | 0.4867        | nan           | 0.1000   | 0.0101  |
| ## | 20       | 0.4301        | nan           | 0.1000   | 0.0022  |
| ## | 40       | 0.3941        | nan           | 0.1000   | -0.0012 |
| ## | 60       | 0.3788        | nan           | 0.1000   | -0.0014 |
| ## | 80       | 0.3683        | nan           | 0.1000   | -0.0011 |
| ## | 100      | 0.3592        | nan           | 0.1000   | -0.0009 |
| ## | 120      | 0.3497        | nan           | 0.1000   | -0.0004 |
| ## | 140      | 0.3419        | nan           | 0.1000   | -0.0008 |
| ## | 150      | 0.3395        | nan           | 0.1000   | -0.0006 |
| ## |          |               |               |          |         |
| ## | Iter     | TrainDeviance | ValidDeviance | StepSize | Improve |
| ## | 1        | 0.6349        | nan           | 0.1000   | 0.0335  |
| ## | 2        | 0.6070        | nan           | 0.1000   | 0.0262  |
| ## | 3        | 0.5804        | nan           | 0.1000   | 0.0238  |
| ## | 4        | 0.5561        | nan           | 0.1000   | 0.0217  |
| ## | 5        | 0.5361        | nan           | 0.1000   | 0.0185  |
| ## | 6        | 0.5202        | nan           | 0.1000   | 0.0166  |
| ## | 7        | 0.5067        | nan           | 0.1000   | 0.0118  |
| ## | 8        | 0.4945        | nan           | 0.1000   | 0.0082  |
| ## | 9        | 0.4826        | nan           | 0.1000   | 0.0098  |
| ## | 10       | 0.4716        | nan           | 0.1000   | 0.0092  |
| ## | 20       | 0.4118        | nan           | 0.1000   | 0.0024  |
| ## | 40       | 0.3756        | nan           | 0.1000   | -0.0004 |
| ## | 60       | 0.3568        | nan           | 0.1000   | -0.0004 |
| ## | 80       | 0.3422        |               | 0.1000   | -0.0000 |
| ## | 100      | 0.3299        | nan           | 0.1000   | -0.0004 |
| ## |          |               | nan           |          |         |
|    | 120      | 0.3200        | nan           | 0.1000   | -0.0016 |
| ## | 140      | 0.3097        | nan           | 0.1000   | -0.0007 |
| ## | 150      | 0.3052        | nan           | 0.1000   | -0.0007 |
| ## | Ttor     | TnainDovi     | Validonii     | C+onC:   | Tmnno   |
|    | Iter     | TrainDeviance | ValidDeviance | StepSize | Improve |
| ## | 1        | 0.6519        | nan           | 0.1000   | 0.0202  |
| ## | 2        | 0.6338        | nan           | 0.1000   | 0.0158  |
| ## | 3        | 0.6174        | nan           | 0.1000   | 0.0181  |
| ## | 4        | 0.6021        | nan           | 0.1000   | 0.0143  |
| ## | 5        | 0.5876        | nan           | 0.1000   | 0.0107  |
| ## | 6        | 0.5753        | nan           | 0.1000   | 0.0113  |
| ## | 7        | 0.5629        | nan           | 0.1000   | 0.0102  |
| ## | 8        | 0.5511        | nan           | 0.1000   | 0.0095  |
| ## | 9        | 0.5420        | nan           | 0.1000   | 0.0067  |
|    |          | 0 5227        | nan           | 0.1000   | 0.0055  |
| ## | 10       | 0.5327        | IIaii         | 0.1000   | 0.0055  |
| ## | 10<br>20 | 0.4739        | nan           | 0.1000   | 0.0021  |
|    |          |               |               |          |         |

| ##   | 60   | 0.4117   | nan  | 0.1000   | -0.0013  |
|--|--|--|--|--|--|
| ##   | 80   | 0.4018   | nan  | 0.1000   | -0.0008  |
| ##   | 100  | 0.3945   | nan  | 0.1000   | -0.0005  |
|  |  |  |  |  |  |
| ##   | 120  | 0.3908   | nan  | 0.1000   | -0.0009  |
| ##   | 140  | 0.3865   | nan  | 0.1000   | -0.0004  |
| ##   | 150  | 0.3851   | nan  | 0.1000   | -0.0019  |
| ##   |  |  |  |  |  |
| ##   | Iter   | TrainDeviance  | ValidDeviance  | StepSize   | Improve  |
| ##   | 1  | 0.6459   | nan  | 0.1000   | 0.0289   |
| ##   | 2  | 0.6190   | nan  | 0.1000   | 0.0268   |
|  |  |  |  |  |  |
| ##   | 3  | 0.5943   | nan  | 0.1000   | 0.0240   |
| ##   | 4  | 0.5754   | nan  | 0.1000   | 0.0167   |
| ##   | 5  | 0.5570   | nan  | 0.1000   | 0.0175   |
| ##   | 6  | 0.5431   | nan  | 0.1000   | 0.0127   |
| ##   | 7  | 0.5290   | nan  | 0.1000   | 0.0130   |
| ##   | 8  | 0.5151   | nan  | 0.1000   | 0.0112   |
|  |  |  |  |  |  |
| ##   | 9  | 0.5037   | nan  | 0.1000   | 0.0094   |
| ##   | 10   | 0.4917   | nan  | 0.1000   | 0.0098   |
| ##   | 20   | 0.4266   | nan  | 0.1000   | 0.0029   |
| ##   | 40   | 0.3847   | nan  | 0.1000   | -0.0001  |
| ##   | 60   | 0.3692   | nan  | 0.1000   | -0.0005  |
| ##   | 80   | 0.3589   | nan  | 0.1000   | -0.0008  |
| ##   | 100  | 0.3496   | nan  | 0.1000   | -0.0011  |
|  |  | 0.3413   |  |  |  |
| ##   | 120  |  | nan  | 0.1000   | -0.0005  |
| ##   | 140  | 0.3358   | nan  | 0.1000   | -0.0010  |
| ##   | 150  | 0.3325   | nan  | 0.1000   | -0.0007  |
| ##   |  |  |  |  |  |
| ##   | Iter   | TrainDeviance  | ValidDeviance  | StepSize   | Improve  |
| ##   | 1  | 0.6447   | nan  | 0.1000   | 0.0303   |
| ##   | 2  | 0.6129   | nan  | 0.1000   | 0.0306   |
| ##   | 3  | 0.5859   | nan  | 0.1000   | 0.0215   |
| ##   | 4  |  |  |  |  |
|  |  | 0.5651   | nan  | 0.1000   | 0.0211   |
| ##   | 5  | 0.5447   | nan  | 0.1000   | 0.0191   |
| ##   | 6  | 0.5253   | nan  | 0.1000   | 0.0173   |
| ##   | 7  | 0.5096   | nan  | 0.1000   | 0.0114   |
| ##   | 8  | 0.4960   | nan  | 0.1000   | 0.0117   |
| ##   | 9  | 0.4835   | nan  | 0.1000   | 0.0100   |
| ##   | 10   | 0.4731   | nan  | 0.1000   | 0.0089   |
| ##   | 20   | 0.4099   | nan  | 0.1000   | 0.0023   |
|  |  |  |  |  |  |
| ##   | 40   | 0.3655   | nan  | 0.1000   | 0.0002   |
| ##   | 60   | 0.3474   | nan  | 0.1000   | -0.0007  |
| ##   | 80   | 0.3319   | nan  | 0.1000   | -0.0003  |
| ##   | 100  | 0.3183   | nan  | 0.1000   | -0.0008  |
| ##   | 120  | 0.3084   | nan  | 0.1000   | -0.0011  |
| ##   | 140  | 0.2978   | nan  | 0.1000   | -0.0009  |
| ##   | 150  | 0.2933   | nan  | 0.1000   | -0.0010  |
| ##   | 130  | 0.2555   | nan  | 0.1000   | 0.0010   |
|  | T4   | TandaDaudanaa  | ValidDeviance  | C+C:   | T  |
| ##   | Iter   | TrainDeviance  |  | StepSize   | Improve  |
| ##   | 1  | 0.6578   | nan  | 0.1000   | 0.0186   |
| ##   | 2  | 0.6387   | nan  | 0.1000   | 0.0172   |
| ##   | 3  | 0.6242   | nan  | 0.1000   | 0.0128   |
| ##   | 4  | 0.6103   | nan  | 0.1000   | 0.0135   |
| ##   | 5  | 0.5980   | nan  | 0.1000   | 0.0109   |
| ##   | 6  | 0.5837   | nan  | 0.1000   | 0.0125   |
| ##   | 7  | 0.5727   | nan  | 0.1000   | 0.0106   |
| ##   | 8  | 0.5628   | nan  | 0.1000   | 0.0091   |
| ##   | 9  | 0.5534   | nan  | 0.1000   | 0.0081   |
|  |  |  |  |  |  |
| ##   | 10   | 0.5445   | nan  | 0.1000   | 0.0076   |
| ##   | 20   | 0.4883   | nan  | 0.1000   | 0.0003   |
| ##   | 40   | 0.4375   | nan  | 0.1000   | 0.0006   |
| ##   | 60   | 0.4194   | nan  | 0.1000   | -0.0003  |
| ##   | 80   | 0.4094   | nan  | 0.1000   | -0.0004  |
| ##   | 100  | 0.4049   | nan  | 0.1000   | -0.0012  |
| ##   | 120  | 0.4004   | nan  | 0.1000   | -0.0005  |
| ##   | 140  | 0.3968   | nan  | 0.1000   | -0.0004  |
| ##   |  | 0.3957   |  |  |  |
| ##   | 150  | 0.393/   | nan  | 0.1000   | -0.0007  |
|  | T+   | Tanian   | Validani   | C+c=C'   | Tm   |
| ##   | Iter   | TrainDeviance  | ValidDeviance  | StepSize   | Improve  |
| ##   | 1  | 0.6490   | nan  | 0.1000   | 0.0293   |
| ##   | 2  | 0.6228   | nan  | 0.1000   | 0.0222   |
| ##   | 3  | 0.5996   | nan  | 0.1000   | 0.0210   |
| ##   |  |  |  |  |  |
|  | 4  | 0.5789   | nan  | 0.1000   | 0.0205   |
| ##   | 4<br>5   |  | nan<br>nan   | 0.1000<br>0.1000   | 0.0205<br>0.0154   |
| ##   |  | 0.5789   |  |  |  |
|  | 5  | 0.5789<br>0.5626   | nan  | 0.1000   | 0.0154<br>0.0124   |
| ##   | 5<br>6<br>7  | 0.5789<br>0.5626<br>0.5449<br>0.5324   | nan<br>nan<br>nan  | 0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085   |
| ##<br>##   | 5<br>6<br>7<br>8   | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218   | nan<br>nan<br>nan<br>nan   | 0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102   |
| ##<br>##<br>##                                     | 5<br>6<br>7<br>8<br>9  | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218   | nan<br>nan<br>nan<br>nan<br>nan                                    | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084   |
| ##<br>##<br>##<br>##                               | 5<br>6<br>7<br>8<br>9<br>10  | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021   | nan<br>nan<br>nan<br>nan<br>nan<br>nan                             | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075   |
| ##<br>##<br>##<br>##                               | 5<br>6<br>7<br>8<br>9<br>10<br>20  | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397   | nan<br>nan<br>nan<br>nan<br>nan                                    | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018   |
| ##<br>##<br>##<br>##                               | 5<br>6<br>7<br>8<br>9<br>10  | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021   | nan<br>nan<br>nan<br>nan<br>nan<br>nan                             | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075   |
| ##<br>##<br>##<br>##                               | 5<br>6<br>7<br>8<br>9<br>10<br>20  | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan                      | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018   |
| ##<br>##<br>##<br>##<br>##                         | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40  | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5518<br>0.5105<br>0.5021<br>0.4397<br>0.3991   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan                      | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018   |
| ##<br>##<br>##<br>##<br>##<br>##                   | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80  | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397<br>0.3991<br>0.3829   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan               | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.0012   |
| ##<br>##<br>##<br>##<br>##<br>##                   | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80  | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397<br>0.3991<br>0.3829<br>0.3720<br>0.3630   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan        | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.0012<br>-0.0009<br>0.0000  |
| ##<br>##<br>##<br>##<br>##<br>##                   | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100   | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397<br>0.3991<br>0.3829<br>0.3720<br>0.3630   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan        | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.00012<br>-0.0009<br>0.0000<br>-0.0006  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##             | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140   | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397<br>0.3991<br>0.3829<br>0.3720<br>0.3630<br>0.3533   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.0012<br>-0.0009<br>0.0000<br>-0.0006<br>-0.0009  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##             | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100   | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397<br>0.3991<br>0.3829<br>0.3720<br>0.3630   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan        | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.00012<br>-0.0009<br>0.0000<br>-0.0006  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##             | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140   | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397<br>0.3991<br>0.3829<br>0.3720<br>0.3630<br>0.3533   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.0012<br>-0.0009<br>0.0000<br>-0.0006<br>-0.0009  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##             | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140   | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397<br>0.3991<br>0.3829<br>0.3720<br>0.3630<br>0.3533   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.0012<br>-0.0009<br>0.0000<br>-0.0006<br>-0.0009  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##             | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140<br>150  | 0.5789<br>0.5626<br>0.5449<br>0.5324<br>0.5218<br>0.5105<br>0.5021<br>0.4397<br>0.3991<br>0.3829<br>0.3720<br>0.3630<br>0.3533<br>0.3441                                 | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.0012<br>-0.0009<br>0.0000<br>-0.0006<br>-0.0005  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##       | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140<br>150  | 0.5789 0.5626 0.5449 0.5324 0.5218 0.5105 0.5021 0.4397 0.3991 0.3829 0.3720 0.3630 0.3533 0.3441 0.3413   | nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0985<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.0001<br>0.0000<br>-0.0006<br>-0.0009<br>-0.0005  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##       | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140<br>150  | 0.5789 0.5626 0.5449 0.5324 0.5218 0.5105 0.5021 0.4397 0.3991 0.3829 0.3720 0.3630 0.3533 0.3441 0.3413  TrainDeviance 0.6418 0.6136                                    | nan                            | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0018<br>-0.0012<br>-0.0009<br>0.0000<br>-0.0009<br>-0.0005<br>Improve<br>0.0324<br>0.0269                                |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##       | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3   | 0.5789 0.5626 0.5449 0.5324 0.5218 0.5105 0.5021 0.4397 0.3991 0.3829 0.3720 0.3630 0.3533 0.3441 0.3413  TrainDeviance 0.6418 0.6136 0.5869                             | nan                            | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000                               | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0085<br>0.0075<br>0.0013<br>-0.0012<br>-0.0009<br>0.0000<br>-0.0009<br>-0.0009<br>-0.0005<br>Improve<br>0.0324<br>0.0226<br>0.0226           |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##       | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4  | 0.5789 0.5626 0.5449 0.5324 0.5218 0.5105 0.5021 0.4397 0.3991 0.3829 0.3720 0.3630 0.3533 0.3441 0.3413  TrainDeviance 0.6418 0.6136 0.5869 0.5653                      | nan                            | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000                     | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0012<br>-0.0012<br>-0.0009<br>-0.0006<br>-0.0009<br>-0.0005<br>Improve<br>0.0324<br>0.0269<br>0.0226<br>0.0198           |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##       | 5<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5  | 0.5789 0.5626 0.5449 0.5324 0.5218 0.5105 0.5021 0.4397 0.3991 0.3829 0.3720 0.3630 0.3533 0.3441 0.3413  TrainDeviance 0.6418 0.6136 0.5869 0.5653 0.5458               | nan                            | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000           | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0012<br>-0.0012<br>-0.0009<br>-0.0006<br>-0.0009<br>-0.0005<br>Improve<br>0.0324<br>0.0269<br>0.0226<br>0.0198<br>0.0182 |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##<br>## | 5<br>6<br>7<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>6<br>6<br>6<br>6<br>7<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8 | 0.5789 0.5626 0.5449 0.5324 0.5218 0.5105 0.5021 0.4397 0.3991 0.3829 0.3720 0.3630 0.3533 0.3441 0.3413  TrainDeviance 0.6418 0.6136 0.5869 0.5653 0.5458               | nan                            | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000 | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0012<br>-0.0012<br>-0.0009<br>0.0000<br>-0.0009<br>-0.0005<br>Improve<br>0.0324<br>0.0269<br>0.0226<br>0.0198            |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##       | 5<br>6<br>7<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>5<br>6  | 0.5789 0.5626 0.5449 0.5324 0.5218 0.5105 0.5021 0.4397 0.3991 0.3829 0.3720 0.3630 0.3533 0.3441 0.3413  TrainDeviance 0.6418 0.6136 0.5869 0.5653 0.5458 0.5293 0.5137 | nan                            | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000 | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0085<br>0.0015<br>-0.0012<br>-0.0012<br>-0.0009<br>-0.0006<br>-0.0009<br>-0.0005<br>Improve<br>0.0324<br>0.0226<br>0.0128<br>0.0129          |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##<br>## | 5<br>6<br>7<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>6<br>6<br>6<br>6<br>7<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8 | 0.5789 0.5626 0.5449 0.5324 0.5218 0.5105 0.5021 0.4397 0.3991 0.3829 0.3720 0.3630 0.3533 0.3441 0.3413  TrainDeviance 0.6418 0.6136 0.5869 0.5653 0.5458               | nan                            | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000 | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0084<br>0.0075<br>0.0012<br>-0.0012<br>-0.0009<br>0.0000<br>-0.0009<br>-0.0005<br>Improve<br>0.0324<br>0.0269<br>0.0226<br>0.0198            |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##       | 5<br>6<br>7<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>5<br>6  | 0.5789 0.5626 0.5449 0.5324 0.5218 0.5105 0.5021 0.4397 0.3991 0.3829 0.3720 0.3630 0.3533 0.3441 0.3413  TrainDeviance 0.6418 0.6136 0.5869 0.5653 0.5458 0.5293 0.5137 | nan                            | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000 | 0.0154<br>0.0124<br>0.0085<br>0.0102<br>0.0085<br>0.0015<br>-0.0012<br>-0.0012<br>-0.0009<br>-0.0006<br>-0.0009<br>-0.0005<br>Improve<br>0.0324<br>0.0226<br>0.0128<br>0.0129          |

| ##                         | 10                    | 0.4815   | nan                             | 0.1000                               | 0.0072                               |
|----------------------------|-----------------------|--|---------------------------------|--------------------------------------|--------------------------------------|
| ##                         | 20                    | 0.4186   | nan                             | 0.1000                               | 0.0021                               |
| ##                         | 40                    | 0.3757   | nan                             | 0.1000                               | -0.0001                              |
| ##                         | 60                    | 0.3578   | nan                             | 0.1000                               | -0.0016                              |
| ##                         | 80                    | 0.3426   | nan                             | 0.1000                               | 0.0003                               |
| ##                         | 100                   | 0.3279   | nan                             | 0.1000                               | -0.0009                              |
| ##                         |                       | 0.3159   |                                 |                                      |                                      |
|                            | 120                   |  | nan                             | 0.1000                               | -0.0017                              |
| ##                         | 140                   | 0.3045   | nan                             | 0.1000                               | -0.0007                              |
| ##                         | 150                   | 0.3007   | nan                             | 0.1000                               | -0.0007                              |
| ##                         |                       |  |                                 |                                      |                                      |
| ##                         | Iter                  | TrainDeviance                                  | ValidDeviance                   | StepSize                             | Improve                              |
| ##                         | 1                     | 0.6451   | nan                             | 0.1000                               | 0.0225                               |
| ##                         | 2                     | 0.6275   | nan                             | 0.1000                               | 0.0158                               |
| ##                         | 3                     | 0.6116   | nan                             | 0.1000                               | 0.0148                               |
| ##                         | 4                     | 0.5951   | nan                             | 0.1000                               | 0.0127                               |
| ##                         | 5                     | 0.5830   | nan                             | 0.1000                               | 0.0109                               |
| ##                         | 6                     | 0.5721   | nan                             | 0.1000                               | 0.0111                               |
| ##                         | 7                     | 0.5636   | nan                             | 0.1000                               | 0.0031                               |
| ##                         | 8                     | 0.5535   | nan                             | 0.1000                               | 0.0090                               |
| ##                         | 9                     | 0.5431   | nan                             | 0.1000                               | 0.0076                               |
| ##                         | 10                    | 0.5340   | nan                             | 0.1000                               | 0.0082                               |
| ##                         | 20                    | 0.4756   | nan                             | 0.1000                               | 0.0036                               |
| ##                         | 40                    | 0.4281   | nan                             | 0.1000                               | 0.0016                               |
| ##                         | 60                    | 0.4129   | nan                             | 0.1000                               | -0.0007                              |
| ##                         | 80                    | 0.4036   | nan                             | 0.1000                               | -0.0007                              |
| ##                         | 100                   | 0.3982   | nan                             | 0.1000                               | -0.0001                              |
|                            |                       |  | nan                             |                                      |                                      |
| ##                         | 120                   | 0.3930   |                                 | 0.1000                               | -0.0007                              |
| ##                         | 140                   | 0.3892   | nan                             | 0.1000                               | -0.0004                              |
| ##                         | 150                   | 0.3875   | nan                             | 0.1000                               | -0.0002                              |
| ##                         | T4 · · ·              | Tankan   | V-14 45                         | Charles:                             | Tana                                 |
| ##                         | Iter                  | TrainDeviance                                  | ValidDeviance                   | StepSize                             | Improve                              |
| ##                         | 1                     | 0.6389   | nan                             | 0.1000                               | 0.0278                               |
| ##                         | 2                     | 0.6111   | nan                             | 0.1000                               | 0.0235                               |
| ##                         | 3                     | 0.5862   | nan                             | 0.1000                               | 0.0200                               |
| ##                         | 4                     | 0.5666   | nan                             | 0.1000                               | 0.0180                               |
| ##                         | 5                     | 0.5480   | nan                             | 0.1000                               | 0.0178                               |
| ##                         | 6                     | 0.5340   | nan                             | 0.1000                               | 0.0130                               |
| ##                         | 7                     | 0.5189   | nan                             | 0.1000                               | 0.0105                               |
| ##                         | 8                     | 0.5049   | nan                             | 0.1000                               | 0.0115                               |
| ##                         | 9                     | 0.4929   | nan                             | 0.1000                               | 0.0101                               |
| ##                         | 10                    | 0.4835   | nan                             | 0.1000                               | 0.0075                               |
| ##                         | 20                    | 0.4259   | nan                             | 0.1000                               | 0.0027                               |
| ##                         | 40                    | 0.3887   | nan                             | 0.1000                               | 0.0001                               |
| ##                         | 60                    | 0.3738   | nan                             | 0.1000                               | -0.0008                              |
| ##                         | 80                    | 0.3629   | nan                             | 0.1000                               | -0.0011                              |
| ##                         | 100                   | 0.3507   | nan                             | 0.1000                               | -0.0013                              |
| ##                         | 120                   | 0.3438   | nan                             | 0.1000                               | -0.0005                              |
| ##                         | 140                   | 0.3365   | nan                             | 0.1000                               | -0.0012                              |
| ##                         | 150                   | 0.3329   | nan                             | 0.1000                               | -0.0010                              |
| ##                         |                       |  |                                 |                                      |                                      |
| ##                         | Iter                  | TrainDeviance                                  | ValidDeviance                   | StepSize                             | Improve                              |
| ##                         | 1                     | 0.6305   | nan                             | 0.1000                               | 0.0333                               |
| ##                         | 2                     | 0.6035   | nan                             | 0.1000                               | 0.0267                               |
| ##                         | 3                     | 0.5775   | nan                             | 0.1000                               | 0.0222                               |
| ##                         | 4                     | 0.5575   | nan                             | 0.1000                               | 0.0199                               |
| ##                         | 5                     | 0.5375   | nan                             | 0.1000                               | 0.0198                               |
| ##                         | 6                     | 0.5203   | nan                             | 0.1000                               | 0.0136                               |
| ##                         | 7                     | 0.5048   |                                 | 0.1000                               | 0.0136                               |
|                            |                       |  | nan                             |                                      |                                      |
| ##                         | 8                     | 0.4899   | nan                             | 0.1000                               | 0.0121                               |
| ##                         | 9                     | 0.4787   | nan                             | 0.1000                               | 0.0089                               |
| ##                         | 10                    | 0.4691   | nan                             | 0.1000                               | 0.0055                               |
| ##                         | 20                    | 0.4073   | nan                             | 0.1000                               | 0.0026                               |
| ##                         | 40                    | 0.3650   | nan                             | 0.1000                               | -0.0000                              |
| ##                         | 60                    | 0.3439   | nan                             | 0.1000                               | -0.0014                              |
| ##                         | 80                    | 0.3294   | nan                             | 0.1000                               | -0.0004                              |
| ##                         | 100                   | 0.3149   | nan                             | 0.1000                               | -0.0006                              |
| ##                         | 120                   | 0.3016   | nan                             | 0.1000                               | -0.0014                              |
| ##                         | 140                   | 0.2924   | nan                             | 0.1000                               | -0.0007                              |
| ##                         | 150                   | 0.2884   | nan                             | 0.1000                               | -0.0005                              |
| ##                         |                       |  |                                 |                                      |                                      |
| ##                         | Iter                  | TrainDeviance                                  | ValidDeviance                   | StepSize                             | Improve                              |
| ##                         | 1                     | 0.6494   | nan                             | 0.1000                               | 0.0202                               |
| ##                         | 2                     | 0.6332   | nan                             | 0.1000                               | 0.0154                               |
| ##                         | 3                     | 0.6187   | nan                             | 0.1000                               | 0.0140                               |
| ##                         | 4                     | 0.6052   | nan                             | 0.1000                               | 0.0113                               |
| ##                         | 5                     | 0.5925   | nan                             | 0.1000                               | 0.0110                               |
| ##                         | 6                     | 0.5779   | nan                             | 0.1000                               | 0.0131                               |
| ##                         | 7                     | 0.5673   | nan                             | 0.1000                               | 0.0105                               |
| ##                         | 8                     | 0.5571   | nan                             | 0.1000                               | 0.0080                               |
| ##                         | 9                     | 0.5450   | nan                             | 0.1000                               | 0.0098                               |
| ##                         | 10                    | 0.5379   | nan                             | 0.1000                               | 0.0067                               |
| ##                         | 20                    | 0.4781   | nan                             | 0.1000                               | 0.0027                               |
| ##                         | 40                    | 0.4331   | nan                             | 0.1000                               | -0.0003                              |
| ##                         | 60                    | 0.4146   | nan                             | 0.1000                               | 0.0001                               |
| ##                         | 80                    | 0.4044   | nan                             | 0.1000                               | -0.0005                              |
| ##                         | 100                   | 0.3984   | nan                             | 0.1000                               | -0.0005                              |
| ##                         | 120                   | 0.3931   | nan                             | 0.1000                               | -0.0004                              |
| ##                         | 140                   | 0.3902   | nan                             | 0.1000                               | -0.0003                              |
| ##                         | 150                   | 0.3882   | nan                             | 0.1000                               | -0.0001                              |
|                            | 250                   | 0.5002   | nan                             | 3.1000                               |                                      |
| ##                         |                       |  | ValidDeviance                   | StepSize                             | Improve                              |
| ##                         | Iter                  | TrainDeviance                                  |                                 |                                      |                                      |
| ##                         | Iter<br>1             | TrainDeviance<br>0.6459                        |                                 | 0.1000                               | 0.0248                               |
| ##                         | 1                     | 0.6459   | nan                             | 0.1000                               | 0.0248<br>0.0258                     |
| ##<br>##<br>##             | 1<br>2                | 0.6459<br>0.6208                               | nan<br>nan                      | 0.1000                               | 0.0258                               |
| ##<br>##<br>##             | 1<br>2<br>3           | 0.6459<br>0.6208<br>0.5980                     | nan<br>nan<br>nan               | 0.1000<br>0.1000                     | 0.0258<br>0.0184                     |
| ##<br>##<br>##<br>##       | 1<br>2<br>3<br>4      | 0.6459<br>0.6208<br>0.5980<br>0.5786           | nan<br>nan<br>nan<br>nan        | 0.1000<br>0.1000<br>0.1000           | 0.0258<br>0.0184<br>0.0181           |
| ##<br>##<br>##<br>##<br>## | 1<br>2<br>3<br>4<br>5 | 0.6459<br>0.6208<br>0.5980<br>0.5786<br>0.5626 | nan<br>nan<br>nan<br>nan<br>nan | 0.1000<br>0.1000<br>0.1000<br>0.1000 | 0.0258<br>0.0184<br>0.0181<br>0.0154 |
| ##<br>##<br>##<br>##       | 1<br>2<br>3<br>4      | 0.6459<br>0.6208<br>0.5980<br>0.5786           | nan<br>nan<br>nan<br>nan        | 0.1000<br>0.1000<br>0.1000           | 0.0258<br>0.0184<br>0.0181           |

| ##             | 7           | 0.5317                  | nan                  | 0.1000             | 0.0164            |
|----------------|-------------|-------------------------|----------------------|--------------------|-------------------|
|                |             |                         |                      |                    |                   |
| ##             | 8           | 0.5167                  | nan                  | 0.1000             | 0.0124            |
| ##             | 9           | 0.5045                  | nan                  | 0.1000             | 0.0106            |
| ##             | 10          | 0.4945                  | nan                  | 0.1000             | 0.0085            |
| ##             | 20          | 0.4297                  | nan                  | 0.1000             | 0.0024            |
| ##             | 40          | 0.3895                  | nan                  | 0.1000             | 0.0003            |
| ##             | 60          | 0.3737                  | nan                  | 0.1000             | -0.0008           |
| ##             | 80          | 0.3621                  | nan                  | 0.1000             | -0.0005           |
| ##             | 100         | 0.3523                  |                      |                    | -0.0007           |
|                |             |                         | nan                  | 0.1000             |                   |
| ##             | 120         | 0.3441                  | nan                  | 0.1000             | -0.0012           |
| ##             | 140         | 0.3363                  | nan                  | 0.1000             | -0.0004           |
| ##             | 150         | 0.3321                  | nan                  | 0.1000             | -0.0005           |
| ##             |             |                         |                      |                    |                   |
| ##             | Iter        | TrainDeviance           | ValidDeviance        | StepSize           | Improve           |
| ##             | 1           | 0.6386                  | nan                  | 0.1000             | 0.0307            |
|                |             | 0.6057                  |                      |                    |                   |
| ##             | 2           |                         | nan                  | 0.1000             | 0.0313            |
| ##             | 3           | 0.5797                  | nan                  | 0.1000             | 0.0247            |
| ##             | 4           | 0.5603                  | nan                  | 0.1000             | 0.0173            |
| ##             | 5           | 0.5434                  | nan                  | 0.1000             | 0.0167            |
| ##             | 6           | 0.5239                  | nan                  | 0.1000             | 0.0156            |
| ##             | 7           | 0.5087                  | nan                  | 0.1000             | 0.0119            |
| ##             | 8           | 0.4947                  | nan                  | 0.1000             | 0.0113            |
| ##             | 9           | 0.4834                  |                      |                    |                   |
|                |             |                         | nan                  | 0.1000             | 0.0105            |
| ##             | 10          | 0.4747                  | nan                  | 0.1000             | 0.0059            |
| ##             | 20          | 0.4103                  | nan                  | 0.1000             | 0.0033            |
| ##             | 40          | 0.3689                  | nan                  | 0.1000             | -0.0014           |
| ##             | 60          | 0.3452                  | nan                  | 0.1000             | -0.0003           |
| ##             | 80          | 0.3310                  | nan                  | 0.1000             | -0.0007           |
| ##             | 100         | 0.3167                  | nan                  | 0.1000             | -0.0004           |
| ##             | 120         | 0.3062                  | nan                  | 0.1000             | -0.0004           |
| ##             |             |                         |                      |                    |                   |
|                | 140         | 0.2962                  | nan                  | 0.1000             | -0.0011           |
| ##             | 150         | 0.2908                  | nan                  | 0.1000             | -0.0014           |
| ##             |             |                         |                      |                    |                   |
| ##             | Iter        | TrainDeviance           | ValidDeviance        | StepSize           | Improve           |
| ##             | 1           | 0.6696                  | nan                  | 0.1000             | 0.0195            |
| ##             | 2           | 0.6502                  | nan                  | 0.1000             | 0.0196            |
| ##             | 3           | 0.6347                  |                      | 0.1000             | 0.0130            |
|                |             |                         | nan                  |                    |                   |
| ##             | 4           | 0.6170                  | nan                  | 0.1000             | 0.0138            |
| ##             | 5           | 0.6009                  | nan                  | 0.1000             | 0.0149            |
| ##             | 6           | 0.5883                  | nan                  | 0.1000             | 0.0121            |
| ##             | 7           | 0.5776                  | nan                  | 0.1000             | 0.0094            |
| ##             | 8           | 0.5658                  | nan                  | 0.1000             | 0.0094            |
| ##             | 9           | 0.5528                  | nan                  | 0.1000             | 0.0106            |
|                |             |                         |                      |                    |                   |
| ##             | 10          | 0.5437                  | nan                  | 0.1000             | 0.0082            |
| ##             | 20          | 0.4807                  | nan                  | 0.1000             | 0.0032            |
| ##             | 40          | 0.4303                  | nan                  | 0.1000             | 0.0007            |
| ##             | 60          | 0.4117                  | nan                  | 0.1000             | 0.0001            |
| ##             | 80          | 0.4026                  | nan                  | 0.1000             | 0.0000            |
| ##             | 100         | 0.3971                  | nan                  | 0.1000             | -0.0004           |
| ##             | 120         | 0.3937                  | nan                  | 0.1000             | -0.0011           |
| ##             | 140         | 0.3895                  | nan                  | 0.1000             | -0.0003           |
|                |             |                         |                      |                    |                   |
| ##             | 150         | 0.3875                  | nan                  | 0.1000             | -0.0008           |
| ##             |             |                         |                      |                    |                   |
| ##             | Iter        | TrainDeviance           | ValidDeviance        | StepSize           | Improve           |
| ##             | 1           | 0.6557                  | nan                  | 0.1000             | 0.0282            |
| ##             | 2           | 0.6269                  | nan                  | 0.1000             | 0.0264            |
| ##             | 3           | 0.6046                  | nan                  | 0.1000             | 0.0206            |
| ##             | 4           | 0.5793                  | nan                  | 0.1000             | 0.0231            |
| ##             | 5           | 0.5610                  | nan                  | 0.1000             | 0.0180            |
| ##             |             |                         |                      |                    |                   |
|                | 6           | 0.5448                  | nan                  | 0.1000             | 0.0147            |
| ##             | 7           | 0.5280                  | nan                  | 0.1000             | 0.0151            |
| ##             | 8           | 0.5139                  | nan                  | 0.1000             | 0.0095            |
| ##             | 9           | 0.5037                  | nan                  | 0.1000             | 0.0097            |
| ##             | 10          | 0.4936                  | nan                  | 0.1000             | 0.0073            |
| ##             | 20          | 0.4304                  | nan                  | 0.1000             | 0.0011            |
| ##             | 40          | 0.3913                  | nan                  | 0.1000             | 0.0000            |
| ##             | 60          | 0.3730                  | nan                  | 0.1000             | -0.0012           |
| ##             | 80          | 0.3610                  | nan                  | 0.1000             | -0.0012           |
| ##             | 100         | 0.3513                  |                      | 0.1000             | -0.0018           |
|                |             |                         | nan                  |                    | -0.0018           |
| ##             | 120         | 0.3436                  | nan                  | 0.1000             |                   |
| ##             | 140         | 0.3357                  | nan                  | 0.1000             | -0.0007           |
| ##             | 150         | 0.3326                  | nan                  | 0.1000             | -0.0008           |
| ##             |             |                         |                      |                    |                   |
| ##             | Iter        | TrainDeviance           | ValidDeviance        | StepSize           | Improve           |
| ##             | 1           | 0.6535                  | nan                  | 0.1000             | 0.0345            |
| ##             | 2           | 0.6217                  | nan                  | 0.1000             | 0.0274            |
| ##             | 3           | 0.5942                  |                      | 0.1000             | 0.0274            |
|                |             |                         | nan                  |                    |                   |
| ##             | 4           | 0.5728                  | nan                  | 0.1000             | 0.0197            |
| ##             | 5           | 0.5489                  | nan                  | 0.1000             | 0.0209            |
| ##             | 6           | 0.5289                  | nan                  | 0.1000             | 0.0173            |
| ##             | 7           | 0.5134                  | nan                  | 0.1000             | 0.0099            |
| ##             | 8           | 0.4969                  | nan                  | 0.1000             | 0.0122            |
| ##             | 9           | 0.4842                  | nan                  | 0.1000             | 0.0122            |
| ##             |             |                         |                      |                    |                   |
|                | 10          | 0.4753                  | nan                  | 0.1000             | 0.0083            |
| ##             | 20          | 0.4143                  | nan                  | 0.1000             | 0.0015            |
| ##             | 40          | 0.3721                  | nan                  | 0.1000             | -0.0000           |
| ##             | 60          | 0.3514                  | nan                  | 0.1000             | -0.0014           |
| ##             | 80          | 0.3354                  | nan                  | 0.1000             | -0.0003           |
| ##             | 100         | 0.3216                  | nan                  | 0.1000             | -0.0006           |
| ##             | 120         | 0.3110                  | nan                  | 0.1000             | -0.0016           |
|                |             |                         |                      |                    |                   |
| ##             | 140         | 0.3002                  | nan                  | 0.1000             | -0.0015           |
| 40.00          |             | 0.2961                  | nan                  | 0.1000             | -0.0008           |
| ##             | 150         |                         |                      |                    |                   |
| ##             | 150         |                         |                      |                    |                   |
|                | 150<br>Iter | TrainDeviance           | ValidDeviance        | StepSize           | Improve           |
| ##             |             |                         | ValidDeviance<br>nan |                    | Improve<br>0.0209 |
| ##<br>##<br>## | Iter<br>1   | TrainDeviance<br>0.6392 | nan                  | StepSize<br>0.1000 | 0.0209            |
| ##             | Iter        | TrainDeviance           |                      | StepSize           | -                 |

| ##  | 4  | 0.5919   | nan   | 0.1000   | 0.0097   |
|---|--|--|---|--|--|
| ##  | 5  | 0.5764   |   | 0.1000   | 0.0123   |
|   |  |  | nan   |  |  |
| ##  | 6  | 0.5645   | nan   | 0.1000   | 0.0096   |
| ##  | 7  | 0.5527   | nan   | 0.1000   | 0.0101   |
| ##  | 8  | 0.5437   | nan   | 0.1000   | 0.0070   |
| ##  | 9  | 0.5344   | nan   | 0.1000   | 0.0081   |
| ##  | 10   | 0.5271   | nan   | 0.1000   | 0.0065   |
| ##  | 20   | 0.4681   | nan   | 0.1000   | 0.0033   |
| ##  | 40   | 0.4236   |   |  |  |
|   |  |  | nan   | 0.1000   | 0.0012   |
| ##  | 60   | 0.4061   | nan   | 0.1000   | -0.0008  |
| ##  | 80   | 0.3979   | nan   | 0.1000   | -0.0008  |
| ##  | 100  | 0.3920   | nan   | 0.1000   | -0.0003  |
| ##  | 120  | 0.3888   | nan   | 0.1000   | -0.0012  |
| ##  | 140  | 0.3843   | nan   | 0.1000   | -0.0008  |
|   |  |  |   |  |  |
| ##  | 150  | 0.3823   | nan   | 0.1000   | -0.0004  |
| ##  |  |  |   |  |  |
| ##  | Iter   | TrainDeviance  | ValidDeviance   | StepSize   | Improve  |
| ##  | 1  | 0.6292   | nan   | 0.1000   | 0.0316   |
| ##  | 2  | 0.6071   | nan   | 0.1000   | 0.0179   |
| ##  | 3  | 0.5823   |   |  |  |
|   |  |  | nan   | 0.1000   | 0.0229   |
| ##  | 4  | 0.5625   | nan   | 0.1000   | 0.0166   |
| ##  | 5  | 0.5473   | nan   | 0.1000   | 0.0155   |
| ##  | 6  | 0.5316   | nan   | 0.1000   | 0.0139   |
| ##  | 7  | 0.5166   | nan   | 0.1000   | 0.0121   |
| ##  | 8  | 0.5021   | nan   | 0.1000   | 0.0096   |
|   | 9  |  |   |  | 0.0074   |
| ##  |  | 0.4921   | nan   | 0.1000   |  |
| ##  | 10   | 0.4822   | nan   | 0.1000   | 0.0070   |
| ##  | 20   | 0.4220   | nan   | 0.1000   | 0.0017   |
| ##  | 40   | 0.3848   | nan   | 0.1000   | 0.0007   |
| ##  | 60   | 0.3699   | nan   | 0.1000   | -0.0017  |
| ##  | 80   | 0.3572   | nan   | 0.1000   | -0.0004  |
| ##  |  |  |   |  |  |
|   | 100  | 0.3489   | nan   | 0.1000   | 0.0000   |
| ##  | 120  | 0.3419   | nan   | 0.1000   | -0.0002  |
| ##  | 140  | 0.3346   | nan   | 0.1000   | -0.0009  |
| ##  | 150  | 0.3310   | nan   | 0.1000   | -0.0009  |
| ##  |  |  |   |  |  |
|   | Iter   | TrainDeviance  | ValidDeviance   | StepSize   | Improve  |
| ##  | 1  |  |   |  |  |
|   |  | 0.6305   | nan   | 0.1000   | 0.0318   |
| ##  | 2  | 0.6019   | nan   | 0.1000   | 0.0271   |
| ##  | 3  | 0.5776   | nan   | 0.1000   | 0.0211   |
| ##  | 4  | 0.5541   | nan   | 0.1000   | 0.0226   |
| ##  | 5  | 0.5371   | nan   | 0.1000   | 0.0161   |
|   |  |  |   |  |  |
| ##  | 6  | 0.5203   | nan   | 0.1000   | 0.0161   |
| ##  | 7  | 0.5042   | nan   | 0.1000   | 0.0122   |
| ##  | 8  | 0.4895   | nan   | 0.1000   | 0.0133   |
| ##  | 9  | 0.4791   | nan   | 0.1000   | 0.0098   |
| ##  | 10   | 0.4677   | nan   | 0.1000   | 0.0079   |
| ##  |  |  |   |  |  |
|   | 20   | 0.4063   | nan   | 0.1000   | 0.0020   |
| ##  | 40   | 0.3654   | nan   | 0.1000   | -0.0001  |
| ##  | 60   | 0.3460   | nan   | 0.1000   | -0.0006  |
| ##  | 80   |  |   |  |  |
|   |  | 0.3312   | nan   | 0.1000   | -0.0004  |
| ##  |  |  |   |  |  |
| ##  | 100  | 0.3191   | nan   | 0.1000   | -0.0010  |
| ##  | 100<br>120   | 0.3191<br>0.3059   | nan<br>nan  | 0.1000<br>0.1000   | -0.0010<br>-0.0003   |
| ##  | 100<br>120<br>140  | 0.3191<br>0.3059<br>0.2952   | nan   | 0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006  |
| ##<br>##<br>##  | 100<br>120   | 0.3191<br>0.3059   | nan<br>nan  | 0.1000<br>0.1000   | -0.0010<br>-0.0003   |
| ##  | 100<br>120<br>140  | 0.3191<br>0.3059<br>0.2952   | nan<br>nan<br>nan   | 0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010   |
| ##<br>##<br>##  | 100<br>120<br>140  | 0.3191<br>0.3059<br>0.2952   | nan<br>nan<br>nan   | 0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006  |
| ##<br>##<br>##  | 100<br>120<br>140<br>150   | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance  | nan<br>nan<br>nan<br>nan  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>StepSize   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010   |
| ##<br>##<br>##<br>##<br>##  | 100<br>120<br>140<br>150<br>Iter   | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435  | nan<br>nan<br>nan<br>nan<br>ValidDeviance<br>nan  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>StepSize<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211  |
| ##<br>##<br>##<br>##<br>##  | 100<br>120<br>140<br>150<br>Iter<br>1<br>2   | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235  | nan<br>nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan   | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>StepSize<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0186  |
| ##<br>##<br>##<br>##<br>##  | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3  | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085  | nan<br>nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan   | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>StepSize<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0186<br>0.0127  |
| ##<br>##<br>##<br>##<br>##<br>##                                  | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4   | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957  | nan<br>nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>StepSize<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0186<br>0.0127<br>0.0124  |
| ##<br>##<br>##<br>##<br>##<br>##                                  | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5  | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957<br>0.5806  | nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan   | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>StepSize<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0186<br>0.0127<br>0.0124<br>0.0117  |
| ##<br>##<br>##<br>##<br>##<br>##                                  | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4   | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957  | nan<br>nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>StepSize<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0186<br>0.0127<br>0.0124  |
| ##<br>##<br>##<br>##<br>##<br>##                                  | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5  | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957  | nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan   | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>StepSize<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0186<br>0.0127<br>0.0124<br>0.0117<br>0.0123  |
| ##<br>##<br>##<br>##<br>##<br>##                                  | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6   | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957<br>0.5806<br>0.5675  | nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan<br>nan<br>nan   | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0186<br>0.0127<br>0.0124<br>0.0117<br>0.0123<br>0.0115  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##                            | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8   | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957<br>0.5806<br>0.5675<br>0.5557  | nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan<br>nan<br>nan   | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0127<br>0.0124<br>0.0117<br>0.0123<br>0.0115<br>0.0094  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##                            | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9  | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957<br>0.5866<br>0.5675<br>0.5557  | nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan                                    | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0126<br>0.0127<br>0.0124<br>0.0117<br>0.0123<br>0.0194<br>0.0094<br>0.0083  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##                      | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>6<br>7<br>8<br>9   | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957<br>0.5806<br>0.5675<br>0.5557<br>0.5456<br>0.5355  | nan<br>nan<br>nan<br>validDeviance<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan                             | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>StepSize<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0186<br>0.0127<br>0.0124<br>0.0115<br>0.0094<br>0.0093<br>0.0070  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##<br>##                | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>6<br>7<br>7<br>8<br>9<br>10<br>20  | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957<br>0.5806<br>0.5675<br>0.5557<br>0.5456<br>0.5355  | Nan<br>Nan<br>Nan<br>ValidDeviance<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan        | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0127<br>0.0124<br>0.0117<br>0.0123<br>0.0115<br>0.0094<br>0.0083<br>0.0070<br>0.0018  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>6<br>7<br>8<br>9   | 0.3191 0.3059 0.2952 0.2903  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226   | nan<br>nan<br>nan<br>validDeviance<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan                             | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0186<br>0.0127<br>0.0124<br>0.0115<br>0.0094<br>0.0093<br>0.0070  |
| ##<br>##<br>##<br>##<br>##<br>##<br>##<br>##<br>##                | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>6<br>7<br>7<br>8<br>9<br>10<br>20  | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957<br>0.5806<br>0.5675<br>0.5557<br>0.5456<br>0.5355  | Nan<br>Nan<br>Nan<br>ValidDeviance<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan        | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0127<br>0.0124<br>0.0117<br>0.0123<br>0.0115<br>0.0094<br>0.0083<br>0.0070<br>0.0018  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>8<br>9<br>10<br>20<br>40   | 0.3191 0.3059 0.2952 0.2903  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226   | nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan                      | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0127<br>0.0124<br>0.0117<br>0.0123<br>0.0115<br>0.0094<br>0.0083<br>0.0070<br>0.0018  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter 1<br>2<br>3<br>4<br>5<br>6<br>6<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80  | 0.3191<br>0.3059<br>0.2952<br>0.2903<br>TrainDeviance<br>0.6435<br>0.6235<br>0.6085<br>0.5957<br>0.5806<br>0.5675<br>0.5557<br>0.5556<br>0.5355<br>0.4682<br>0.4226<br>0.4033<br>0.3947  | Nan<br>Nan<br>Nan<br>ValidDeviance<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan        | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0001 0.0018 0.0001  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>7<br>8<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100   | 0.3191 0.3059 0.2952 0.2903  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901  | Nan<br>Nan<br>Nan<br>ValidDeviance<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan        | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0127<br>0.0124<br>0.0117<br>0.0123<br>0.0115<br>0.0094<br>0.0083<br>0.0070<br>0.0018<br>0.0004<br>0.0001<br>-0.0008<br>-0.0005  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>9<br>10<br>20<br>40<br>60<br>80<br>80<br>100<br>120   | 0.3191 0.3059 0.2952 0.2903  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870   | nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>na         | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0127<br>0.0124<br>0.0117<br>0.0123<br>0.0115<br>0.0094<br>0.0083<br>0.0070<br>0.0018<br>0.0001<br>0.0001<br>-0.0008<br>-0.0005<br>-0.0006   |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter 1<br>2<br>3<br>4<br>5<br>6<br>6<br>7<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140  | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4683 0.3947 0.3901 0.3870 0.3870  | Nan<br>Nan<br>Nan<br>Nan<br>ValidDeviance<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan<br>Nan | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0083 0.0070 0.0018 0.0004 0.0001 -0.0008 -0.0005 -0.0006  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>9<br>10<br>20<br>40<br>60<br>80<br>80<br>100<br>120   | 0.3191 0.3059 0.2952 0.2903  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870   | nan<br>nan<br>nan<br>ValidDeviance<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>nan<br>na         | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0127<br>0.0124<br>0.0117<br>0.0123<br>0.0115<br>0.0094<br>0.0083<br>0.0070<br>0.0018<br>0.0001<br>0.0001<br>-0.0008<br>-0.0005<br>-0.0006   |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter 1<br>2<br>3<br>4<br>5<br>6<br>6<br>7<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140  | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4683 0.3947 0.3901 0.3870 0.3870  | nan nan nan ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0083 0.0070 0.0018 0.0004 0.0001 -0.0008 -0.0005 -0.0006  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***              | 100<br>120<br>140<br>150<br>Iter 1<br>2<br>3<br>4<br>5<br>6<br>6<br>7<br>7<br>8<br>9<br>10<br>20<br>40<br>60<br>80<br>100<br>120<br>140  | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5456 0.5355 0.5266 0.4682 0.4022 0.4033 0.3947 0.3901 0.3870 0.3819   | nan nan nan ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0001 0.0001 -0.0008 -0.0008 -0.0008 -0.0008   |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100 120 140 150 150 150 160 160 160 160 160 160 160 160 160 16   | 0.3191 0.3059 0.2952 0.2903  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3819  TrainDeviance  | Nannan nan nan nan nan nan nan nan nan n  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010<br>-0.0003<br>-0.0006<br>-0.0010<br>Improve<br>0.0211<br>0.0124<br>0.0127<br>0.0124<br>0.0115<br>0.0094<br>0.0083<br>0.0070<br>0.0018<br>0.0001<br>-0.0008<br>-0.0005<br>-0.0008<br>-0.0003<br>Improve   |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3870 0.3842 0.3819  TrainDeviance 0.6356  | Nannan nan nan nan nan nan nan nan nan n  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010 Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0008 0.0000 -0.0008 -0.0005 -0.0006 -0.0008 -0.0003 Improve 0.0281   |
| ### ### ### ### ### ### ### ### ### ##                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3870 0.38819  TrainDeviance 0.6356 0.6090  | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0094 0.0018 0.0070 0.0018 0.0004 -0.0008 -0.0006 -0.0008 -0.0006 -0.0008 -0.0003   |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>3<br>4<br>4<br>5<br>6<br>6<br>7<br>7<br>8<br>8<br>9<br>9<br>10<br>120<br>140<br>150<br>150<br>150<br>150<br>150<br>150<br>150<br>150<br>150<br>15 | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858  | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0018 0.0004 0.0001 -0.0008 -0.0006 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6985 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858   | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0123 0.0115 0.0094 0.0018 0.0070 0.0018 0.0008 -0.0008 -0.0008 -0.0008 -0.0003  Improve 0.0281 0.0262 0.0229 0.0182  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100<br>120<br>140<br>150<br>Iter<br>1<br>2<br>3<br>3<br>4<br>4<br>5<br>6<br>6<br>7<br>7<br>8<br>8<br>9<br>9<br>10<br>120<br>140<br>150<br>150<br>150<br>150<br>150<br>150<br>150<br>150<br>150<br>15 | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858  | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000<br>0.1000   | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0018 0.0004 0.0001 -0.0008 -0.0006 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6985 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858   | Nannan nan nan nan nan nan nan nan nan n  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0123 0.0115 0.0094 0.0018 0.0070 0.0018 0.0008 -0.0008 -0.0008 -0.0008 -0.0003  Improve 0.0281 0.0262 0.0229 0.0182  |
| ***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>***<br>** | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.38842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317  | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0094 0.0018 0.0070 0.0018 0.0006 -0.0006 -0.0006 -0.0006 -0.0006 -0.0008 -0.0005 -0.0006 -0.0008 -0.0008 -0.0008 -0.001  |
| *** *** *** *** *** *** *** *** *** **                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.56699 0.5468 0.5317 0.5182   | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0018 0.0004 0.0001 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008  |
| ### ### ### ### ### ### ### ### ### ##                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.38819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5182  | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0018 0.0006 -0.0008 |
| *** *** *** *** *** *** *** *** *** **                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5950 0.4929  | Nannan nan nan nan nan nan nan nan nan n  | 0.1000   | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0094 0.0018 0.0070 0.0018 0.0005 -0.0008 -0.0008 -0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0018 0.00262 0.0229 0.0182 0.0187 0.0160 0.0126 0.0116   |
| ### ### ### ### ### ### ### ### ### ##                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.38819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5182  | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010 Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0018 0.0006 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008 -0.0008  |
| *** *** *** *** *** *** *** *** *** **                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5950 0.4929  | Nannan nan nan nan nan nan nan nan nan n  | 0.1000   | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0094 0.0018 0.0070 0.0018 0.0005 -0.0008 -0.0008 -0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0018 0.00262 0.0229 0.0182 0.0187 0.0160 0.0126 0.0116   |
| **************************************                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4083 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5050 0.4929 0.4833 0.4204  | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.00010 Improve 0.0211 0.0186 0.0127 0.0123 0.0115 0.0094 0.0018 0.0070 0.0018 0.0008 -0.0008 -0.0008 -0.0003 Improve 0.0281 0.0262 0.0229 0.0182 0.0187 0.0182 0.0160 0.0126 0.0126 0.0126 0.0126  |
| **************************************                            | 100 120 140 150 11ter 1 2 2 3 3 4 4 5 6 6 7 7 8 8 9 9 100 1200 1400 150 150 150 150 150 150 150 150 150 1  | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.38819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.4929 0.4833 0.4929 0.4833   | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000   | -0.0010 -0.0003 -0.0006 -0.0010 Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0083 0.0070 0.0018 -0.0005 -0.0006 -0.0008 -0.0005 -0.0006 -0.0008 -0.0018 0.0262 0.0229 0.0182 0.0187 0.0160 0.0160 0.0161  |
| **************************************                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5858 0.5669 0.5468 0.5317 0.5182 0.5950 0.4929 0.4833 0.4204 0.3835 0.3701        | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0094 0.0011 0.0008 0.0070 0.0018 0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0018 0.0029 0.0182 0.0129 0.0187 0.0180 0.0126 0.0126 0.0114 0.0083   |
| ######################################                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3882 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5050 0.4929 0.4833 0.4204 0.3835 0.3701 0.3569  | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0094 0.0018 0.0070 0.0018 0.0006 -0.0006 -0.0008 -0.0006 -0.0006 -0.0018 0.0229 0.0182 0.0182 0.0182 0.0182 0.0183 0.015 -0.0160 0.0160 0.0160 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0017 -0.0006   |
| ######################################                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5950 0.4929 0.4833 0.3701 0.3835 0.3701 0.3835 0.3701 0.3569 0.3569 | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0093 0.0016 0.0008 -0.0008   |
| ######################################                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3882 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5050 0.4929 0.4833 0.4204 0.3835 0.3701 0.3569  | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0094 0.0018 0.0070 0.0018 0.0006 -0.0006 -0.0008 -0.0006 -0.0006 -0.0018 0.0229 0.0182 0.0182 0.0182 0.0182 0.0183 0.015 -0.0160 0.0160 0.0160 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0116 0.0017 -0.0006   |
| ######################################                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5950 0.4929 0.4833 0.3701 0.3835 0.3701 0.3835 0.3701 0.3569 0.3569 | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010  Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0093 0.0016 0.0008 -0.0008   |
| ######################################                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5866 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5050 0.4929 0.4833 0.4204 0.3835 0.3701 0.38569 0.3488       | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000 | -0.0010 -0.0003 -0.0006 -0.0010 Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0094 0.0018 0.0070 0.0018 0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0018 0.0182 0.0229 0.0182 0.0229 0.0182 0.0182 0.0183 0.015 -0.0006 -0.0008   |
| ######################################                            | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5806 0.5675 0.5557 0.5456 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.4929 0.4833 0.4204 0.3835 0.3701 0.3569 0.3569 0.3488 0.3425        | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000  | -0.0010 -0.0003 -0.0006 -0.0010 Improve 0.0211 0.0186 0.0127 0.0124 0.0117 0.0123 0.0115 0.0094 0.0001 -0.0008 -0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0006 -0.0008 -0.0006 -0.0008 -0.0006 -0.0008 -0.0006 -0.0008 -0.0006 -0.0008 -0.0006 -0.0008 -0.0006 -0.0008 -0.0006 -0.0008 -0.0006 -0.0008 -0.0006 -0.0008 -0.0006 -0.0007 -0.0006 -0.0006 -0.0006 -0.0006 -0.0006 -0.0006 -0.0006 -0.0006 -0.0008 -0.0008 -0.0008                                 |
| *******************************                                   | 100 120 140 150 150 150 150 150 150 150 150 150 15   | 0.3191 0.3059 0.2952 0.2993  TrainDeviance 0.6435 0.6235 0.6085 0.5957 0.5866 0.5557 0.5456 0.5355 0.5266 0.4682 0.4226 0.4033 0.3947 0.3901 0.3870 0.3842 0.3819  TrainDeviance 0.6356 0.6090 0.5858 0.5669 0.5468 0.5317 0.5182 0.5050 0.4929 0.4833 0.4204 0.3835 0.3701 0.38569 0.3488       | ValidDeviance nan nan nan nan nan nan nan nan nan na  | 0.1000 | -0.0010 -0.0003 -0.0006 -0.0010 Improve 0.0211 0.0186 0.0127 0.0124 0.0115 0.0094 0.0018 0.0070 0.0018 0.0005 -0.0008 -0.0005 -0.0008 -0.0005 -0.0018 0.0182 0.0229 0.0182 0.0229 0.0182 0.0182 0.0183 0.015 -0.0006 -0.0008   |

| ## | 20<br>40  | 0.4302<br>0.3926        | nan<br>nan    | 0.1000<br>0.1000   | 0.0021            |
|----|-----------|-------------------------|---------------|--------------------|-------------------|
| ## | 9<br>10   | 0.5000<br>0.4885        | nan<br>nan    | 0.1000<br>0.1000   | 0.0101<br>0.0075  |
| ## | 8         | 0.5116                  | nan<br>nan    | 0.1000             | 0.0098            |
| ## | 6<br>7    | 0.5397<br>0.5235        | nan           | 0.1000<br>0.1000   | 0.0143<br>0.0140  |
| ## | 5         | 0.5554                  | nan           | 0.1000             | 0.0161            |
| ## | 4         |                         | nan           | 0.1000             | 0.0132            |
| ## | 3         | 0.5955                  | nan           | 0.1000             | 0.0192            |
| ## | 2         |                         | nan<br>nan    | 0.1000             | 0.0240            |
| ## | Iter<br>1 | TrainDeviance<br>0.6403 | ValidDeviance | StepSize<br>0.1000 | Improve<br>0.0305 |
| ## |           |                         |               |                    | _                 |
| ## | 150       | 0.2925                  | nan           | 0.1000             | -0.0011           |
| ## | 140       | 0.2974                  | nan           | 0.1000             | -0.0018           |
| ## | 120       | 0.3058                  | nan           | 0.1000             | -0.0013           |
| ## | 100       | 0.3193                  | nan           | 0.1000             | -0.0017           |
| ## | 80        | 0.3299                  | nan           | 0.1000             | -0.0009           |
| ## | 60        | 0.3444                  | nan           | 0.1000             | -0.0009           |
| ## | 20<br>40  | 0.4022<br>0.3619        | nan<br>nan    | 0.1000<br>0.1000   | 0.0015<br>-0.0003 |
| ## | 10        | 0.4629                  | nan           | 0.1000             | 0.0084            |
| ## | 9         | 0.4747                  | nan           | 0.1000             | 0.0046            |
| ## | 8         | 0.4846                  | nan           | 0.1000             | 0.0113            |
| ## | 7         |                         | nan           | 0.1000             | 0.0145            |
| ## | 6         | 0.5168                  | nan           | 0.1000             | 0.0148            |
| ## | 5         | 0.5354                  | nan           | 0.1000             | 0.0129            |
| ## | 4         | 0.5554                  | nan           | 0.1000             | 0.0229            |
| ## | 3         | 0.5763                  | nan           | 0.1000             | 0.0232            |
| ## | 2         | 0.6020                  | nan           | 0.1000             | 0.0244            |
|    | 1         | 0.6302                  | nan           | 0.1000             | 0.0321            |

not a good model. low r-squared. lower with specific variables