R Notebook: random forest on dataset with classes

```
library(caret)
```

```
## Loading required package: ggplot2
```

```
## Loading required package: lattice
```

```
library(ggplot2)
```

```
df = read.csv("./df.csv")
```
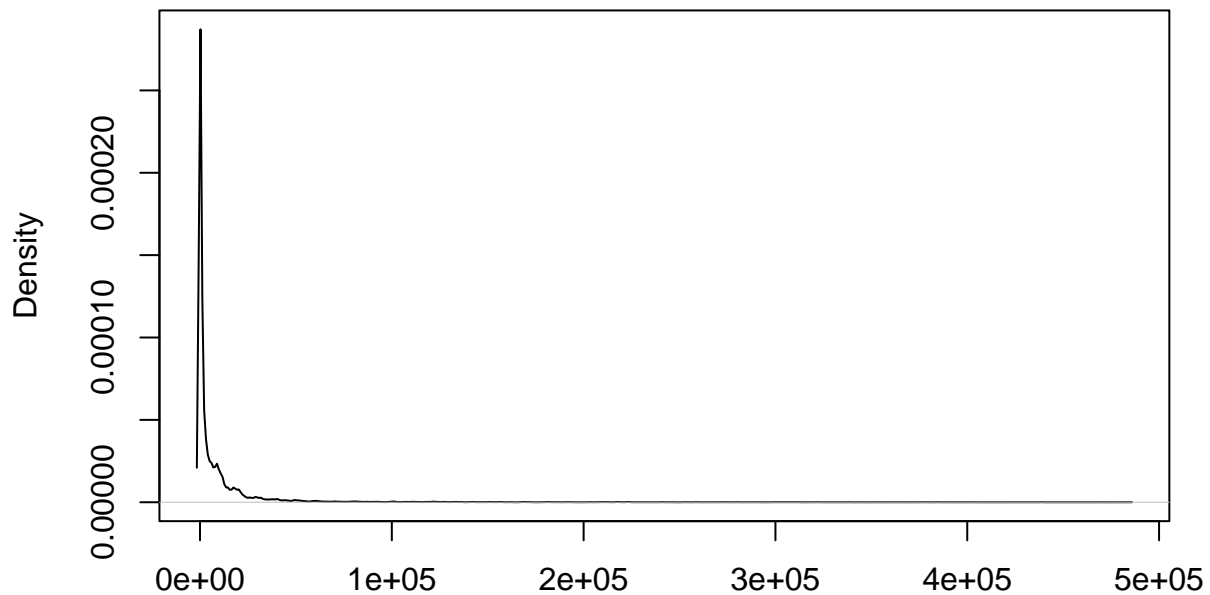
```
min(df$resolved_updated_diff)
```

```
## [1] 0
```

```
max(df$resolved_updated_diff)
```

```
## [1] 484208
```

```
plot(density(df$resolved_updated_diff))
```

density.default(x = df$resolved_updated_diff)

N = 114660   Bandwidth = 550.7

```
median(df$resolved_updated_diff)
```

```
## [1] 1104
```

```
mean(df$resolved_updated_diff)
```

```
## [1] 9801.435
```

```
IQR(df$resolved_updated_diff)
```

```
## [1] 8426
```

```
sd(df$resolved_updated_diff)
```

```
## [1] 29452.41
```

```
# make classes for time
# class needs to have at least 2000 observations within it
df$class = "TBA"
df[df$resolved_updated_diff == 0,]$class = '0mins'
df[df$resolved_updated_diff > 0 &  df$resolved_updated_diff <= 5,]$class = '5mins'
df[df$resolved_updated_diff > 5 &  df$resolved_updated_diff <= 10,]$class = '10mins'
```

```r
df[df$resolved_updated_diff > 10 &  df$resolved_updated_diff <= 30,]$class = '30mins'
df[df$resolved_updated_diff > 30 &  df$resolved_updated_diff <= 60,]$class = '1hr'
df[df$resolved_updated_diff > 60 &  df$resolved_updated_diff <= 180,]$class = '3hr'
df[df$resolved_updated_diff > 180 &  df$resolved_updated_diff <= 360,]$class = '6hr'
df[df$resolved_updated_diff > 360 &  df$resolved_updated_diff <= 1440,]$class = '1day'
df[df$resolved_updated_diff > 1440 &  df$resolved_updated_diff <= 2880,]$class = '2days'
df[df$resolved_updated_diff > 2880 &  df$resolved_updated_diff <= 4320,]$class = '3days'
df[df$resolved_updated_diff > 4320 &  df$resolved_updated_diff <= 5760,]$class = '4days'
df[df$resolved_updated_diff > 5760 &  df$resolved_updated_diff <= 7200,]$class = '5days'
df[df$resolved_updated_diff > 7200 &  df$resolved_updated_diff <= 8640,]$class = '6days'
df[df$resolved_updated_diff > 8640 &  df$resolved_updated_diff <= 10080,]$class = '7days'
df[df$resolved_updated_diff > 10080 &  df$resolved_updated_diff <= 11520,]$class = '8days'
df[df$resolved_updated_diff > 11520 &  df$resolved_updated_diff <= 14400,]$class = '10days'
df[df$resolved_updated_diff > 14400 &  df$resolved_updated_diff <= 20160,]$class = '14days'
df[df$resolved_updated_diff > 20160 &  df$resolved_updated_diff <= 40320,]$class = '14days'
df[df$resolved_updated_diff > 40320,]$class = '>14days'
```

```r
#write.csv(df,"./df_with_class.csv", row.names = T)
df = read.csv("./df_with_class.csv")
```

```r
df = subset(df, select=-c(sys_updated_by, number, subcategory))
df$class = as.factor(df$class)
```

```r
#install.packages("randomForest")
library(randomForest)
```

```
## randomForest 4.6-14
```

```
## Type rfNews() to see new features/changes/bug fixes.
```

```
##
## Attaching package: 'randomForest'
```

```
## The following object is masked from 'package:ggplot2':
##
##     margin
```

```r
# try on small data set
df_small = df[1:5000,]
train_idx = createDataPartition(df_small$resolved_updated_diff, p = 0.8, list=F)
df_train = df_small[train_idx,]
df_test = df_small[-train_idx,]
# try a randomforest model
rf_mod = randomForest(class~., data=df_train, ntree=1000)
df_test_X = subset(df_test, select=-c(class))
df_test_y = df_test$class
pred = predict(rf_mod, df_test)

columns = c("pred", "actual")
acc_df = data.frame(matrix(nrow=nrow(df_test), ncol = length(columns)))
colnames(acc_df) = columns
```

```
acc_df$pred = c(pred)
acc_df$actual = c(df_test_y)
acc_df
```

```
##        pred   actual
## 1     0mins    0mins
## 2     2days    2days
## 3     0mins    0mins
## 4     3days    3days
## 5     0mins    0mins
## 6      1day     1day
## 7     3days    4days
## 8     2days    4days
## 9     0mins    0mins
## 10    5mins    5mins
## 11    3days    3days
## 12    3days    3days
## 13    3days    3days
## 14    0mins    0mins
## 15      3hr      3hr
## 16    0mins    0mins
## 17  >14days  >14days
## 18    0mins    0mins
## 19    5mins    5mins
## 20     1day     1day
## 21    3days    3days
## 22    0mins    0mins
## 23    2days    2days
## 24    0mins    0mins
## 25    0mins    0mins
## 26    0mins    0mins
## 27    3days    7days
## 28   14days   14days
## 29    3days    3days
## 30    0mins    0mins
## 31   14days   14days
## 32   14days   14days
## 33   14days   14days
## 34   14days   14days
## 35    4days    4days
## 36    0mins    0mins
## 37    0mins    0mins
## 38    2days    2days
## 39     1day     1day
## 40     1day     1day
## 41    0mins    0mins
## 42    0mins    0mins
## 43    3days    3days
## 44    5mins    5mins
## 45     1day   30mins
## 46     1day     1day
## 47    3days    3days
## 48    0mins    0mins
```

```
## 49      1day     1day
## 50     5mins    5mins
## 51     0mins    0mins
## 52     3days    3days
## 53    14days   14days
## 54       1hr   30mins
## 55     0mins    0mins
## 56     2days    4days
## 57     3days    4days
## 58     3days    4days
## 59     3days    3days
## 60     0mins    0mins
## 61     3days    4days
## 62     2days    2days
## 63     2days    3days
## 64     0mins    0mins
## 65      1day     1day
## 66       3hr      1hr
## 67     0mins    0mins
## 68     3days    4days
## 69     2days    2days
## 70     0mins    0mins
## 71     0mins    0mins
## 72     3days    3days
## 73     3days    3days
## 74     3days    3days
## 75     3days    3days
## 76     2days    2days
## 77     2days    2days
## 78     5days    5days
## 79     0mins    0mins
## 80     0mins    0mins
## 81    14days   14days
## 82    14days   14days
## 83      1day     1day
## 84      1day     1day
## 85      1day     1day
## 86     0mins    0mins
## 87      1day     1day
## 88     0mins    0mins
## 89     2days      3hr
## 90     0mins    0mins
## 91     3days    3days
## 92   >14days  >14days
## 93    14days   14days
## 94    14days   14days
## 95    14days   14days
## 96    14days   14days
## 97    14days   14days
## 98    10days    7days
## 99     0mins    0mins
## 100    2days      6hr
## 101    0mins    0mins
## 102    2days    8days
```

```
## 103    5days    5days
## 104    0mins    0mins
## 105     1day      3hr
## 106    5mins    5mins
## 107    3days    8days
## 108    7days    7days
## 109    7days    7days
## 110   14days   14days
## 111   10days   10days
## 112   10days   10days
## 113   10days   10days
## 114     1day      3hr
## 115    0mins    0mins
## 116    0mins    0mins
## 117    0mins    0mins
## 118    0mins    0mins
## 119   14days   14days
## 120   10days   10days
## 121      6hr      6hr
## 122      6hr      6hr
## 123    2days    2days
## 124    2days    2days
## 125     1day      6hr
## 126    0mins    0mins
## 127    7days    7days
## 128    6days    5days
## 129      1hr      1hr
## 130    0mins    0mins
## 131     1day     1day
## 132     1day      1hr
## 133    2days    7days
## 134    3days    3days
## 135     1day     1day
## 136    5days    6days
## 137    5days    6days
## 138    3days    3days
## 139    0mins    0mins
## 140     1day     1day
## 141     1day   10mins
## 142   14days   14days
## 143    2days    2days
## 144    0mins    0mins
## 145     1day     1day
## 146    5mins    5mins
## 147    2days    4days
## 148    4days    4days
## 149    0mins    0mins
## 150     1day     1day
## 151     1day     1day
## 152    3days    3days
## 153      3hr      3hr
## 154 >14days  >14days
## 155   14days   14days
## 156   14days   14days
```

```
## 157   14days   14days
## 158   14days   14days
## 159   14days   14days
## 160   14days   14days
## 161   14days   14days
## 162    1day     1day
## 163    1day     1day
## 164    0mins    0mins
## 165 >14days  >14days
## 166    5mins    5mins
## 167 >14days  >14days
## 168    0mins    0mins
## 169    2days    2days
## 170    1day     1day
## 171    1day     1day
## 172    0mins    0mins
## 173 >14days  >14days
## 174    7days    7days
## 175   14days   14days
## 176    0mins    0mins
## 177    3days    8days
## 178    0mins    0mins
## 179 >14days  >14days
## 180 >14days  >14days
## 181    0mins    0mins
## 182   14days   14days
## 183    0mins    0mins
## 184    1day     1day
## 185      6hr   30mins
## 186 >14days  >14days
## 187 >14days  >14days
## 188   14days   14days
## 189    0mins    0mins
## 190    0mins    0mins
## 191    2days    2days
## 192 >14days  >14days
## 193    0mins    0mins
## 194    1day      6hr
## 195    0mins    0mins
## 196    8days    7days
## 197   14days   14days
## 198    2days    2days
## 199      3hr      3hr
## 200    1day      3hr
## 201   10mins   30mins
## 202    0mins    0mins
## 203   14days   14days
## 204   10days   10days
## 205    1day     1day
## 206   14days   14days
## 207   14days   14days
## 208    4days    6days
## 209    1day     1day
## 210    7days    7days
```

```
## 211    1day      1hr
## 212     1hr      1hr
## 213     1hr   30mins
## 214    3days    3days
## 215    0mins    0mins
## 216   14days   14days
## 217   14days   14days
## 218    0mins    0mins
## 219    0mins    0mins
## 220     1day     1day
## 221   14days   14days
## 222   14days   14days
## 223   14days   14days
## 224    8days    8days
## 225   30mins   30mins
## 226   10days   10days
## 227  >14days  >14days
## 228  >14days  >14days
## 229   14days   14days
## 230   14days   14days
## 231    0mins    0mins
## 232   30mins   10mins
## 233    5mins    5mins
## 234    0mins    0mins
## 235     1day     1day
## 236    5mins    5mins
## 237    0mins    0mins
## 238     1day     1day
## 239   30mins   30mins
## 240   14days   14days
## 241    3days    6days
## 242    3days    3days
## 243    2days    3days
## 244    3days    3days
## 245   30mins   30mins
## 246    2days    2days
## 247    0mins    0mins
## 248    3days    3days
## 249    5mins    5mins
## 250    3days    3days
## 251    3days    3days
## 252     3hr      3hr
## 253    0mins    0mins
## 254     1day     1day
## 255     1day     1day
## 256    0mins    0mins
## 257  >14days  >14days
## 258  >14days  >14days
## 259    0mins    0mins
## 260    0mins    0mins
## 261   14days   14days
## 262   14days   14days
## 263    7days    7days
## 264    0mins    0mins
```

```
## 265     3hr      3hr
## 266    1day     1day
## 267    1day     1day
## 268    1day     1day
## 269   3days    3days
## 270   2days    2days
## 271    1day      6hr
## 272     3hr      1hr
## 273   0mins    0mins
## 274   2days    2days
## 275   0mins    0mins
## 276   3days    3days
## 277   0mins    0mins
## 278  14days   14days
## 279  14days   14days
## 280  14days   14days
## 281   4days    4days
## 282     3hr      3hr
## 283   0mins    0mins
## 284     3hr      3hr
## 285   2days    8days
## 286   2days    5days
## 287   2days    2days
## 288   5mins    5mins
## 289   2days    2days
## 290   2days    2days
## 291   8days    8days
## 292    1day     1day
## 293  14days   14days
## 294  14days   14days
## 295  14days   14days
## 296  14days   14days
## 297  10days   10days
## 298   7days    7days
## 299  14days   14days
## 300  14days   14days
## 301  14days   14days
## 302   4days    4days
## 303   0mins    0mins
## 304   3days    3days
## 305     6hr      6hr
## 306   2days    7days
## 307  14days   14days
## 308   0mins    0mins
## 309     3hr      3hr
## 310 >14days  >14days
## 311   7days    7days
## 312   2days    7days
## 313   2days    6days
## 314   2days    6days
## 315  14days   14days
## 316  14days   14days
## 317  10days   10days
## 318  10days   10days
```

```
## 319     1day     1day
## 320     1day     1day
## 321    0mins    0mins
## 322    2days    2days
## 323     1day     1day
## 324      3hr      3hr
## 325   14days   14days
## 326   10days   10days
## 327    2days    2days
## 328   14days   14days
## 329   14days   14days
## 330   10days   10days
## 331    2days    2days
## 332    2days    2days
## 333    5mins    5mins
## 334    0mins    0mins
## 335    3days    3days
## 336   14days   14days
## 337   14days   14days
## 338    8days    7days
## 339    5days    5days
## 340    5days    5days
## 341    5days    5days
## 342    3days    3days
## 343   10days   10days
## 344    0mins    0mins
## 345      6hr      6hr
## 346      3hr      6hr
## 347    5mins    5mins
## 348   14days   14days
## 349   10days   10days
## 350    0mins    0mins
## 351    2days    2days
## 352    0mins    0mins
## 353    0mins    0mins
## 354     1day      3hr
## 355    5mins    5mins
## 356      3hr   10mins
## 357     1day   10mins
## 358    2days    3days
## 359     1day     1day
## 360    0mins    0mins
## 361    0mins    0mins
## 362    0mins    0mins
## 363      3hr      3hr
## 364    2days    6days
## 365    0mins    0mins
## 366    5mins    5mins
## 367    0mins    0mins
## 368    0mins    0mins
## 369    2days    2days
## 370    2days    4days
## 371      3hr      3hr
## 372    4days    4days
```

```
## 373      3hr      3hr
## 374   10days   10days
## 375   10days   10days
## 376    2days    2days
## 377      6hr      1hr
## 378    5mins    5mins
## 379    5mins    5mins
## 380   14days   14days
## 381   14days   14days
## 382      3hr      3hr
## 383    0mins    0mins
## 384    0mins    0mins
## 385    3days    3days
## 386     1day     1day
## 387     1day     1day
## 388   14days   14days
## 389    2days    2days
## 390     1day     1day
## 391    2days    2days
## 392    2days    2days
## 393    2days    2days
## 394    2days    2days
## 395    2days    2days
## 396    0mins    0mins
## 397    4days    4days
## 398     1day      6hr
## 399    0mins    0mins
## 400    4days    4days
## 401    0mins    0mins
## 402    0mins    0mins
## 403    0mins    0mins
## 404    2days    2days
## 405    0mins    0mins
## 406      3hr      3hr
## 407    0mins    0mins
## 408   14days   14days
## 409    7days    7days
## 410    0mins    0mins
## 411      3hr      3hr
## 412   14days   14days
## 413   30mins   30mins
## 414   30mins   30mins
## 415    0mins    0mins
## 416    6days    8days
## 417   14days   14days
## 418   14days   14days
## 419   14days   14days
## 420    0mins    0mins
## 421    2days    2days
## 422      3hr      3hr
## 423      6hr      6hr
## 424     1day     1day
## 425    0mins    0mins
## 426   14days   14days
```

```
## 427  14days  14days
## 428   5days   5days
## 429     3hr     3hr
## 430     3hr     3hr
## 431   0mins   0mins
## 432   0mins   0mins
## 433   6days   6days
## 434   5mins   5mins
## 435   0mins   0mins
## 436  14days  14days
## 437   6days   6days
## 438   0mins   0mins
## 439     3hr     3hr
## 440   2days   2days
## 441    1day    1day
## 442     6hr     6hr
## 443     6hr     6hr
## 444    1day  30mins
## 445   0mins   0mins
## 446   2days     1hr
## 447   5days   3days
## 448  10days  10days
## 449   3days   6days
## 450   2days   2days
## 451   2days   2days
## 452   3days   3days
## 453     3hr     3hr
## 454   0mins   0mins
## 455   2days   4days
## 456     3hr     3hr
## 457   3days   3days
## 458   2days   3days
## 459   0mins   0mins
## 460 >14days >14days
## 461  14days  14days
## 462   4days   4days
## 463   2days   2days
## 464    1day    1day
## 465   3days   3days
## 466    1day    1day
## 467     3hr     3hr
## 468     3hr     3hr
## 469  14days  14days
## 470  10days  10days
## 471   0mins   0mins
## 472  14days  14days
## 473    1day    1day
## 474  14days  14days
## 475  14days  14days
## 476   5mins   5mins
## 477   0mins   0mins
## 478  14days  14days
## 479   0mins   0mins
## 480   5mins   5mins
```

```
## 481    0mins    0mins
## 482    5mins    5mins
## 483    2days    2days
## 484    2days    3days
## 485    0mins    0mins
## 486    0mins    0mins
## 487    2days    7days
## 488    5mins    5mins
## 489   10days   10days
## 490    5mins    5mins
## 491    0mins    0mins
## 492    2days    2days
## 493    3days    3days
## 494      6hr      6hr
## 495    2days    2days
## 496    2days    2days
## 497    0mins    0mins
## 498 >14days >14days
## 499   14days   14days
## 500   14days   14days
## 501     1day     1day
## 502     1day      3hr
## 503     1day     1day
## 504   10days   10days
## 505    5days    5days
## 506    3days    3days
## 507    3days    3days
## 508     1day     1day
## 509    2days    2days
## 510    0mins    0mins
## 511    0mins    0mins
## 512    2days    2days
## 513   14days   14days
## 514    0mins    0mins
## 515    2days    7days
## 516    2days    2days
## 517   14days   14days
## 518    6days    6days
## 519    0mins    0mins
## 520 >14days >14days
## 521     1day     1day
## 522   14days   14days
## 523     1day     1day
## 524     1day     1day
## 525    0mins    0mins
## 526      3hr      3hr
## 527 >14days >14days
## 528    3days    3days
## 529    2days    2days
## 530   30mins   30mins
## 531 >14days >14days
## 532 >14days >14days
## 533   14days   14days
## 534     1day     1day
```

```
## 535    3days    3days
## 536     1day     1day
## 537     1day     1day
## 538     1day      6hr
## 539      3hr      3hr
## 540      3hr      3hr
## 541      3hr      1hr
## 542    0mins    0mins
## 543    0mins    0mins
## 544    0mins    0mins
## 545    5days    6days
## 546    3days    3days
## 547    3days    3days
## 548      3hr   30mins
## 549    7days    7days
## 550    5days    5days
## 551    4days    4days
## 552    4days    4days
## 553    3days    3days
## 554    5days    6days
## 555    4days    4days
## 556   14days   14days
## 557   14days   14days
## 558   14days   14days
## 559   14days   14days
## 560    0mins    0mins
## 561    2days    5days
## 562    0mins    0mins
## 563    0mins    0mins
## 564    0mins    0mins
## 565    8days    8days
## 566    2days    2days
## 567    4days    4days
## 568    5mins    5mins
## 569    0mins    0mins
## 570    5days    5days
## 571   14days   14days
## 572     1day      6hr
## 573    5mins    5mins
## 574    0mins    0mins
## 575     1day     1day
## 576    7days    7days
## 577    2days    2days
## 578    0mins    0mins
## 579    6days    7days
## 580     1day      1hr
## 581     1day      1hr
## 582   30mins   30mins
## 583    0mins    0mins
## 584    5mins    5mins
## 585    0mins    0mins
## 586    0mins    0mins
## 587   14days   14days
## 588   10days   10days
```

```
## 589  10days   10days
## 590  10days   10days
## 591   0mins    0mins
## 592    1day     1day
## 593   0mins    0mins
## 594    1day     1day
## 595   0mins    0mins
## 596     3hr      3hr
## 597    1day   10mins
## 598   0mins    0mins
## 599   2days    2days
## 600    1day     1day
## 601    1day     1day
## 602   0mins    0mins
## 603   5mins    5mins
## 604   7days    7days
## 605    1day   10mins
## 606   0mins    0mins
## 607   6days    6days
## 608   4days    4days
## 609   0mins    0mins
## 610   5days    6days
## 611   6days    6days
## 612   2days    2days
## 613   5mins    5mins
## 614  14days   14days
## 615   7days    6days
## 616   0mins    0mins
## 617  14days   14days
## 618   0mins    0mins
## 619    1day     1day
## 620   0mins    0mins
## 621     3hr      3hr
## 622   0mins    0mins
## 623    1day     1day
## 624  14days   14days
## 625  14days   14days
## 626  14days   14days
## 627  14days   14days
## 628   7days    7days
## 629   5days    5days
## 630     3hr      3hr
## 631     3hr   10mins
## 632   2days    2days
## 633  14days   14days
## 634    1day     1day
## 635   8days    7days
## 636   5days    7days
## 637   0mins    0mins
## 638   5mins    5mins
## 639   4days    4days
## 640   5days    6days
## 641 >14days  >14days
## 642   0mins    0mins
```

```
## 643    5days    4days
## 644    2days    2days
## 645    2days    2days
## 646    5mins    5mins
## 647    0mins    0mins
## 648    2days    3days
## 649     1day     1day
## 650      6hr      6hr
## 651    0mins    0mins
## 652   14days   14days
## 653    4days    4days
## 654     1day     1day
## 655     1day     1day
## 656    2days    2days
## 657    5mins    5mins
## 658    0mins    0mins
## 659    2days    2days
## 660     1day     1day
## 661     1day     1day
## 662   30mins   10mins
## 663 >14days  >14days
## 664   14days   14days
## 665   14days   14days
## 666     1day     1day
## 667     1day     1day
## 668   14days   14days
## 669   14days   14days
## 670    0mins    0mins
## 671    2days    6days
## 672    4days    4days
## 673    4days    3days
## 674    4days    3days
## 675      3hr      3hr
## 676      1hr      1hr
## 677      1hr      1hr
## 678    6days    7days
## 679    0mins    0mins
## 680   30mins   30mins
## 681   14days   14days
## 682   14days   14days
## 683    0mins    0mins
## 684    0mins    0mins
## 685    2days    2days
## 686    0mins    0mins
## 687    7days    7days
## 688   30mins   30mins
## 689   10days   10days
## 690   10days    8days
## 691   30mins   30mins
## 692    0mins    0mins
## 693    0mins    0mins
## 694    0mins    0mins
## 695    5mins    5mins
## 696 >14days  >14days
```

```
## 697      3hr      3hr
## 698    0mins    0mins
## 699    4days    4days
## 700    4days    4days
## 701    0mins    0mins
## 702    2days    2days
## 703    0mins    0mins
## 704    2days    2days
## 705     1day     1day
## 706    0mins    0mins
## 707    0mins    0mins
## 708   14days   14days
## 709   14days   14days
## 710   10days   10days
## 711    5mins    5mins
## 712   14days   14days
## 713    0mins    0mins
## 714    5days    6days
## 715    0mins    0mins
## 716     1day     1day
## 717     1day     1day
## 718  >14days  >14days
## 719   14days   14days
## 720    2days    2days
## 721    0mins    0mins
## 722   14days   14days
## 723   14days   14days
## 724   10days    8days
## 725   10days    8days
## 726   14days   14days
## 727   14days   14days
## 728    6days    6days
## 729   14days   14days
## 730   14days   14days
## 731   14days   14days
## 732    5days    5days
## 733    5mins    5mins
## 734    0mins    0mins
## 735    2days    2days
## 736   14days   14days
## 737    2days      3hr
## 738    2days      6hr
## 739     1day      6hr
## 740      3hr      3hr
## 741      3hr      3hr
## 742    0mins    0mins
## 743    0mins    0mins
## 744    6days    6days
## 745    2days    6days
## 746    5days    5days
## 747    0mins    0mins
## 748    0mins    0mins
## 749    5days    6days
## 750    2days    3days
```

```
## 751      6hr      6hr
## 752 30mins      3hr
## 753 >14days >14days
## 754    2days    2days
## 755   14days   14days
## 756   14days   14days
## 757     1day     1day
## 758   14days   14days
## 759     1day     1day
## 760    5mins    5mins
## 761    0mins    0mins
## 762   14days   14days
## 763    2days    5days
## 764    5days    5days
## 765    3days    3days
## 766    7days    7days
## 767   10days   10days
## 768    6days    6days
## 769    6days    6days
## 770 >14days >14days
## 771   14days   14days
## 772   14days   14days
## 773    8days    8days
## 774    2days    2days
## 775   14days   14days
## 776     1day      6hr
## 777 30mins      1hr
## 778   14days   14days
## 779   14days   14days
## 780    2days    2days
## 781 >14days >14days
## 782    0mins    0mins
## 783 >14days >14days
## 784   14days   14days
## 785    6days    6days
## 786    0mins    0mins
## 787      3hr      3hr
## 788   14days   14days
## 789    0mins    0mins
## 790   10days   10days
## 791     1day     1day
## 792     1day     1day
## 793    8days    8days
## 794    2days    6days
## 795    2days    2days
## 796    2days    2days
## 797   10days   10days
## 798 >14days >14days
## 799   14days   14days
## 800    3days    3days
## 801    3days    3days
## 802     1day    4days
## 803    5mins    5mins
## 804    8days    8days
```

```
## 805    7days    7days
## 806      3hr      3hr
## 807      3hr      3hr
## 808     1day     1day
## 809    2days    2days
## 810    2days    2days
## 811    2days    5days
## 812    3days    3days
## 813     0mins    0mins
## 814    2days    2days
## 815   14days   14days
## 816   14days   14days
## 817    8days    8days
## 818     1day     1day
## 819     1day     1day
## 820    5mins    5mins
## 821    3days    3days
## 822     0mins    0mins
## 823     0mins    0mins
## 824    4days    5days
## 825     0mins    0mins
## 826    8days    8days
## 827     0mins    0mins
## 828  >14days  >14days
## 829     0mins    0mins
## 830     0mins    0mins
## 831    7days    7days
## 832    2days    2days
## 833     1day     1day
## 834     0mins    0mins
## 835     0mins    0mins
## 836  >14days  >14days
## 837  >14days  >14days
## 838  >14days  >14days
## 839   14days   14days
## 840   14days   14days
## 841   14days   14days
## 842   14days   14days
## 843      6hr      6hr
## 844  >14days  >14days
## 845  >14days  >14days
## 846  >14days  >14days
## 847     1day     1day
## 848     0mins    0mins
## 849   14days   14days
## 850    7days    7days
## 851     1day     1day
## 852   14days   14days
## 853   14days   14days
## 854   14days   14days
## 855     1day     1day
## 856    2days    2days
## 857   14days   14days
## 858    5days    5days
```

```
## 859 >14days >14days
## 860    4days    4days
## 861    0mins    0mins
## 862   10days   10days
## 863    8days    8days
## 864    2days    2days
## 865   14days   14days
## 866   14days   14days
## 867    0mins    0mins
## 868   10days   10days
## 869    2days    2days
## 870    0mins    0mins
## 871    8days    8days
## 872   14days   14days
## 873   14days   14days
## 874    4days    4days
## 875   30mins   30mins
## 876    2days    2days
## 877    2days    2days
## 878    2days    2days
## 879    2days    2days
## 880   14days   14days
## 881   14days   14days
## 882    5days    5days
## 883    2days    2days
## 884     1day     1day
## 885     1day     1day
## 886 >14days >14days
## 887    0mins    0mins
## 888     1day     1day
## 889      3hr   10mins
## 890     1day     1day
## 891    0mins    0mins
## 892    2days      1hr
## 893      3hr   30mins
## 894      3hr   10mins
## 895    0mins    0mins
## 896   10days   10days
## 897    7days    7days
## 898    4days    4days
## 899   14days   14days
## 900 >14days >14days
## 901 >14days >14days
## 902   10days   10days
## 903   10mins   10mins
## 904    0mins    0mins
## 905    0mins    0mins
## 906    0mins    0mins
## 907      1hr   30mins
## 908    2days   30mins
## 909   10mins   10mins
## 910   30mins   30mins
## 911   14days   14days
## 912   14days   14days
```

```
## 913    6days    6days
## 914    4days    4days
## 915    0mins    0mins
## 916   14days   14days
## 917    2days    3days
## 918    2days      1hr
## 919 >14days  >14days
## 920    2days    2days
## 921   14days   14days
## 922    0mins    0mins
## 923    2days    3days
## 924      6hr      6hr
## 925 >14days  >14days
## 926    0mins    0mins
## 927    0mins    0mins
## 928    6days    6days
## 929    0mins    0mins
## 930   14days   14days
## 931   10days    6days
## 932     1day     1day
## 933     1day     1day
## 934    0mins    0mins
## 935 >14days  >14days
## 936 >14days  >14days
## 937    0mins    0mins
## 938 >14days  >14days
## 939    0mins    0mins
## 940    5days    5days
## 941    0mins    0mins
## 942    5days    5days
## 943    5days    5days
## 944    3days    3days
## 945    3days    3days
## 946    0mins    0mins
## 947    8days    8days
## 948    0mins    0mins
## 949    0mins    0mins
## 950    2days   30mins
## 951     1day     1day
## 952    2days    4days
## 953    5mins    5mins
## 954     1day     1day
## 955 >14days  >14days
## 956    2days      3hr
## 957    0mins    0mins
## 958 >14days  >14days
## 959 >14days  >14days
## 960    2days    7days
## 961   14days   14days
## 962    0mins    0mins
## 963 >14days  >14days
## 964 >14days  >14days
## 965    0mins    0mins
## 966    5mins    5mins
```

```
## 967   7days    7days
## 968   2days    2days
## 969   5days    5days
## 970   0mins    0mins
## 971   2days    2days
## 972   0mins    0mins
## 973   2days    7days
## 974  14days   14days
## 975  14days   14days
## 976  10days   10days
## 977  10days   10days
## 978   6days    6days
## 979   0mins    0mins
## 980   0mins    0mins
## 981   5days    5days
## 982   3days    3days
## 983   2days    2days
## 984  14days   14days
## 985   0mins    0mins
## 986   3days    3days
## 987   2days    2days
## 988   0mins    0mins
## 989    1day     1day
## 990  14days   14days
## 991    1day     1day
## 992     3hr      3hr
## 993 >14days  >14days
## 994 >14days  >14days
## 995 >14days  >14days
## 996   5days    5days
## 997   3days    3days
## 998   5mins    5mins
```

```
acc = nrow(acc_df[acc_df$pred == acc_df$actual,])
acc/nrow(df_test)
```

```
## [1] 0.8737475
```