

MIS 64099– Capstone Project for Business Analytics Final Result

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Install R packages

```
install.packages("randomForest")
install.packages("corrplot")
install.packages("caretEnsemble")
install.packages("lsr")
install.packages("rpart")
install.packages("caret")
install.packages("e1071")
```

Exploratory Data Analysis

```
options(warm=-1)
# Data splitting
library(rsample)

## Warning: package 'rsample' was built under R version 4.2.1

# Data visualization
library(lubridate)

##
## Attaching package: 'lubridate'

## The following objects are masked from 'package:base':
##
##   date, intersect, setdiff, union

library(ggplot2)

## Warning: package 'ggplot2' was built under R version 4.2.1

# Data transformation
library(randomForest)

## Warning: package 'randomForest' was built under R version 4.2.1
## randomForest 4.7-1.1

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

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

```
## The following object is masked from 'package:ggplot2':  
##  
##     margin  
library(dplyr)  
  
##  
## Attaching package: 'dplyr'  
  
## The following object is masked from 'package:randomForest':  
##  
##     combine  
  
## The following objects are masked from 'package:stats':  
##  
##     filter, lag  
  
## The following objects are masked from 'package:base':  
##  
##     intersect, setdiff, setequal, union  
  
# Caret Libraries  
library(rpart)  
library(caret)  
  
## Warning: package 'caret' was built under R version 4.2.1  
## Loading required package: lattice  
## Warning: package 'lattice' was built under R version 4.2.1  
library(caretEnsemble)  
  
## Warning: package 'caretEnsemble' was built under R version 4.2.1  
  
##  
## Attaching package: 'caretEnsemble'  
  
## The following object is masked from 'package:ggplot2':  
##  
##     autoplot  
library(e1071)  
  
## Warning: package 'e1071' was built under R version 4.2.1  
  
##  
## Attaching package: 'e1071'  
  
## The following object is masked from 'package:rsample':  
##  
##     permutations  
library(corrplot)
```

```
## corplot 0.92 loaded

library(mlbench)

## Warning: package 'mlbench' was built under R version 4.2.1

library(pROC)

## Type 'citation("pROC")' for a citation.

##
## Attaching package: 'pROC'

## The following objects are masked from 'package:stats':
##
##      cov, smooth, var

library(lsr)

## Warning: package 'lsr' was built under R version 4.2.1
```

Functions to clean datasets

Read datasets from the csv file

```
clean_dataset <- function() {
  dataset = "C:/Users/mavul/OneDrive/Desktop/Health care data.csv"
  if (file.exists(dataset)) {
    alldata <- read.csv(file=dataset, header = T)
  }
  return(alldata)
}
```

Convert and grouping age groups

The four groups are (0-25, 26-40, 41-50, 50-65, 65+)

```
age <- function(dob, age.day = today(), units = "years", floor = TRUE) {
  calc.age = interval(dob, age.day) / duration(num = 1, units = units)
  if (floor) return(as.integer(floor(calc.age)))

  return(calc.age)
}

age_group <- function(a) {
  ifelse(a<25, 25, ifelse(a<40, 40, ifelse(a<50, 50, 65)))
}
```

Match and group the countries based on the patients ethnic group

```
e_europe <- c('Ukraine', 'Russia', 'Poland', 'Czech Republic', 'Hungary')
w_europe <-
c('Austria', 'Belgium', 'France', 'Germany', 'Italy', 'Netherlands', 'Portugal', 'Sp
```

```

ain','Switzerland')
n_europe <- c('Sweden', 'Finland', 'Denmark')
c_europe <- c('England','Scotland','Ireland')
ethnic_group <- function(country) {
  ifelse((country %in% e_europe), 'e_europe',
        ifelse((country %in% w_europe), 'w_europe',
              ifelse((country %in% n_europe), 'n_europe',
                    ifelse((country %in% c_europe), 'c_europe',
                          country))))))
}

```

Remove the patient ids from the dataset

```

patients <- clean_dataset()
patients <- patients[, -1]
str(patients)

## 'data.frame':    2000 obs. of  13 variables:
## $ gender          : chr  "female" "female" "male" "male" ...
## $ dob             : chr  "1944-03-09" "1966-07-02" "1981-05-31" "1945-
##                    02-13" ...
## $ zipcode         : int   89136 94105 89127 44101 89136 94105 60612
##                    43221 89127 43210 ...
## $ employment_status : chr  "retired" "employed" "employed" "retired" ...
## $ education        : chr  "bachelors" "phd/md" "masters" "bachelors" ...
## $ marital_status    : chr  "married" "married" "married" "married" ...
## $ children          : int   1 4 2 2 3 2 0 2 2 7 ...
## $ ancestry          : chr  "Portugal" "Sweden" "Germany" "Denmark" ...
## $ avg_commute       : num   13.4 15.2 23.6 19.6 36.5 ...
## $ daily_internet_use: num   2.53 6.77 3.63 5 7.75 3.34 6.75 3.01 4.12 3.15
## ...
## $ available_vehicles: int   2 2 1 3 1 0 2 3 1 1 ...
## $ military_service  : chr  "no" "no" "no" "no" ...
## $ disease           : chr  "hypertension" "endometriosis" "prostate
##                    cancer" "multiple sclerosis" ...

summary(patients)

##      gender          dob          zipcode      employment_status
## Length:2000      Length:2000      Min.    :10001      Length:2000
## Class :character  Class :character  1st Qu.:43221      Class :character
## Mode  :character  Mode  :character  Median :60612      Mode  :character
##                                     Mean  :63388
##                                     3rd Qu.:90008
##                                     Max.   :94110
##      education      marital_status      children      ancestry
## Length:2000      Length:2000      Min.    :0.000      Length:2000
## Class :character  Class :character  1st Qu.:1.000      Class :character
## Mode  :character  Mode  :character  Median :2.000      Mode  :character
##                                     Mean   :2.267
##                                     3rd Qu.:3.000

```

```
##                               Max.    :7.000
##   avg_commute   daily_internet_use available_vehicles military_service
##   Min.    :-2.47   Min.    :1.010   Min.    :0.000   Length:2000
##   1st Qu.:23.46   1st Qu.:4.020   1st Qu.:1.000   Class :character
##   Median :30.32   Median :5.010   Median :2.000   Mode  :character
##   Mean    :30.38   Mean    :4.993   Mean    :1.746
##   3rd Qu.:37.13   3rd Qu.:5.973   3rd Qu.:3.000
##   Max.    :63.73   Max.    :8.820   Max.    :4.000
##   disease
##   Length:2000
##   Class :character
##   Mode  :character
##
##
##
```

From the summary, there are no N/A or missing data in the dataset. We need to work on the education column values by fixing the misspelled words

```
patients$education <- ifelse(patients$education == 'highscool',
  as.character('highschool'), as.character(patients$education))
patients$education <- ifelse(as.factor(patients$education) == 'phD/MD',
  as.character('phd/md'), as.character(patients$education))
patients$education <- as.factor(patients$education)
```

Group the ancestry countries to ethnic groups

```
patients$ancestry <- as.factor(ethnic_group(patients$ancestry))
```

Convert the date of birth into age and group them into 25-40-50-65

```
patients$age <- age(patients$dob)
patients$age <- age_group(age(patients$dob))
```

We need to change places to move each disease to a separate column with binary values (0 is the patient with not disease and 1 is the patient who has the disease)

```
binary_value <- function(value, compare_to) {
  ifelse(value==compare_to,1,0)
}

patients$prostate_cancer <- binary_value(patients$disease,'prostate cancer')
patients$skin_cancer <- binary_value(patients$disease,'skin cancer')
patients$breast_cancer <- binary_value(patients$disease,'breast cancer')
patients$hiv_aids <- binary_value(patients$disease,'HIV/AIDS')
patients$diabetes <- binary_value(patients$disease,'diabetes')
patients$heart_disease <- binary_value(patients$disease,'heart disease')
patients$hypertension <- binary_value(patients$disease,'hypertension')
patients$endometriosis <- binary_value(patients$disease,'endometriosis')
patients$multiple_sclerosis <- binary_value(patients$disease,'multiple
sclerosis')
patients$schizophrenia <- binary_value(patients$disease,'schizophrenia')
```

```

patients$kidney_disease <- binary_value(patients$disease,'kidney disease')
patients$gastritis <- binary_value(patients$disease,'gastritis')
patients$alzheimers <- binary_value(patients$disease,'Alzheimer disease')
str(patients)

## 'data.frame':    2000 obs. of  27 variables:
## $ gender          : chr  "female" "female" "male" "male" ...
## $ dob             : chr  "1944-03-09" "1966-07-02" "1981-05-31" "1945-
02-13" ...
## $ zipcode         : int   89136 94105 89127 44101 89136 94105 60612
43221 89127 43210 ...
## $ employment_status : chr  "retired" "employed" "employed" "retired" ...
## $ education        : Factor w/ 4 levels "bachelors","highschool",...: 1 4
3 1 3 2 4 1 3 2 ...
## $ marital_status    : chr  "married" "married" "married" "married" ...
## $ children          : int   1 4 2 2 3 2 0 2 2 7 ...
## $ ancestry          : Factor w/ 4 levels "c_europe","e_europe",...: 4 3 4
3 4 4 2 1 4 2 ...
## $ avg_commute       : num   13.4 15.2 23.6 19.6 36.5 ...
## $ daily_internet_use: num   2.53 6.77 3.63 5 7.75 3.34 6.75 3.01 4.12 3.15
...
## $ available_vehicles: int   2 2 1 3 1 0 2 3 1 1 ...
## $ military_service  : chr  "no" "no" "no" "no" ...
## $ disease           : chr  "hypertension" "endometriosis" "prostate
cancer" "multiple sclerosis" ...
## $ age              : num   65 65 50 65 65 65 65 65 65 65 ...
## $ prostate_cancer   : num   0 0 1 0 0 0 0 0 0 0 ...
## $ skin_cancer       : num   0 0 0 0 1 0 0 0 0 0 ...
## $ breast_cancer     : num   0 0 0 0 0 0 0 1 0 0 ...
## $ hiv_aids          : num   0 0 0 0 0 0 0 0 0 1 ...
## $ diabetes          : num   0 0 0 0 0 0 0 0 0 0 ...
## $ heart_disease     : num   0 0 0 0 0 0 0 0 0 0 ...
## $ hypertension     : num   1 0 0 0 0 0 0 0 0 0 ...
## $ endometriosis     : num   0 1 0 0 0 0 0 0 0 0 ...
## $ multiple_sclerosis: num   0 0 0 1 0 0 0 0 0 0 ...
## $ schizophrenia     : num   0 0 0 0 0 0 0 0 0 0 ...
## $ kidney_disease    : num   0 0 0 0 0 0 1 0 0 0 ...
## $ gastritis         : num   0 0 0 0 0 0 0 0 0 0 ...
## $ alzheimers        : num   0 0 0 0 0 0 0 0 0 0 ...

```

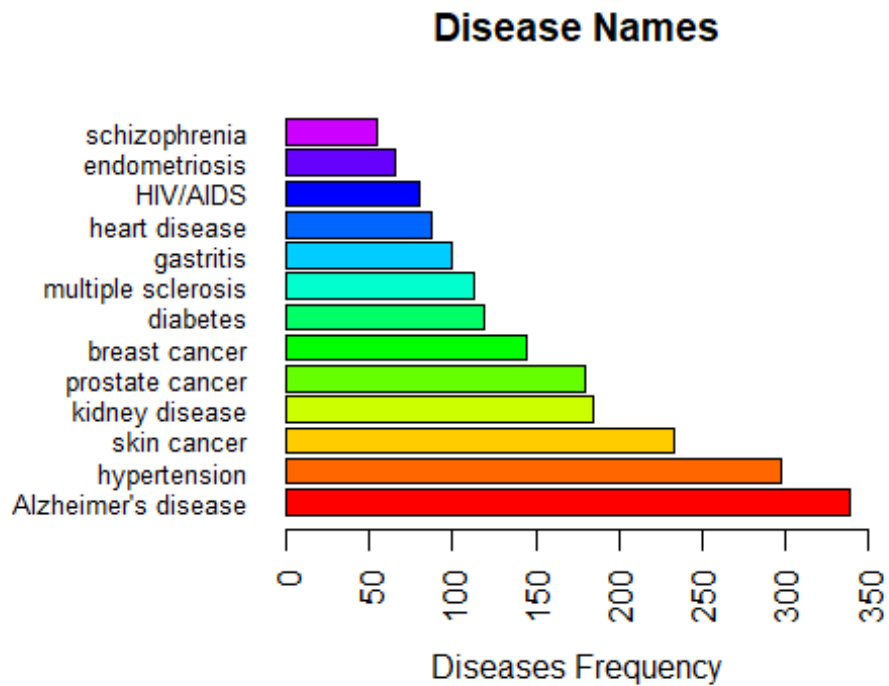
Barplots for the distribution of the categorical columns to count the total number of diseases in the dataset

```

par(las=2) # make label text perpendicular to axis
par(mar=c(5,8,4,2)) # increase y-axis margin.
disease_counts <- table(patients$disease)
barplot(sort(disease_counts, decreasing = TRUE), main="Disease Names",
        xlab="Diseases Frequency",
        col=rainbow(15),

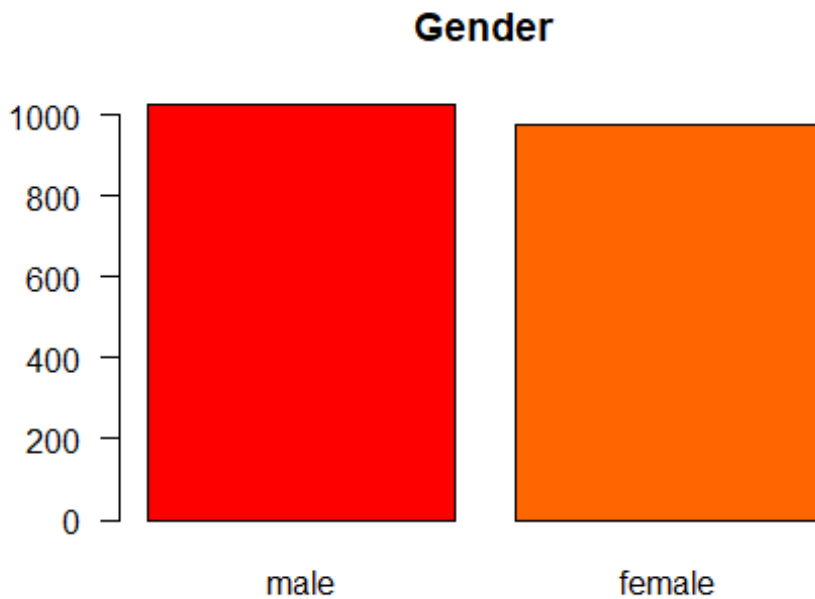
```

```
horiz=TRUE,  
cex.names=0.8,  
xlim = c(0, 350))
```



Gender breakdown

```
gender_counts <- table(patients$gender)  
barplot(sort(gender_counts, decreasing = TRUE), main="Gender",  
        col=rainbow(15), las=1)
```

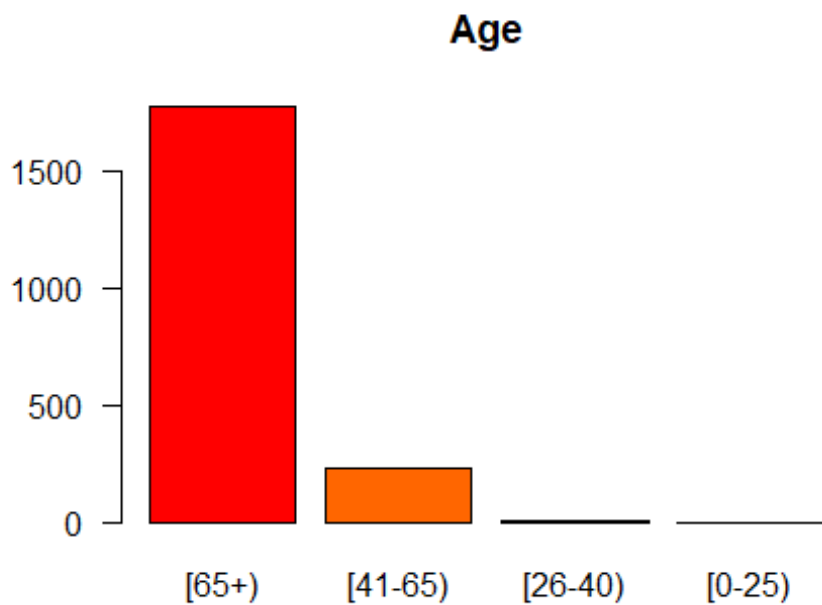


Age breakdown

```
age_breaks <- c(0,25,40,65,100)
tags <- c("[0-25)", "[26-40)", "[41-65)", "[65+)")
age_group_tags <- cut(patients$age,
                      breaks=age_breaks,
                      include.lowest=TRUE,
                      right=FALSE,
                      labels=tags)
summary(age_group_tags)

##  [0-25) [26-40) [41-65)  [65+)
##      0       2     225   1773

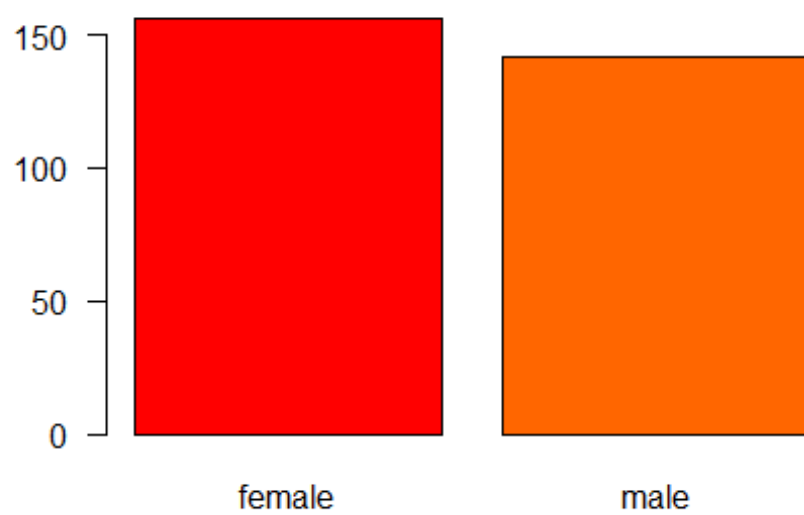
#age_counts <- table(patients$age)
age_counts <- table(age_group_tags)
barplot(sort(age_counts, decreasing = TRUE), main="Age",
        col=rainbow(15), las=1)
```

Gender and disease breakdown

```
disease_name = c(as.character(unique(patients$disease)))  
for (d in disease_name) {  
  gender_disease_counts <- subset(patients, patients$disease == d)  
  gender_disease_counts <- table(gender_disease_counts$gender)  
  barplot(gender_disease_counts, main=d, col=rainbow(15), las=1)  
}
```

hypertension



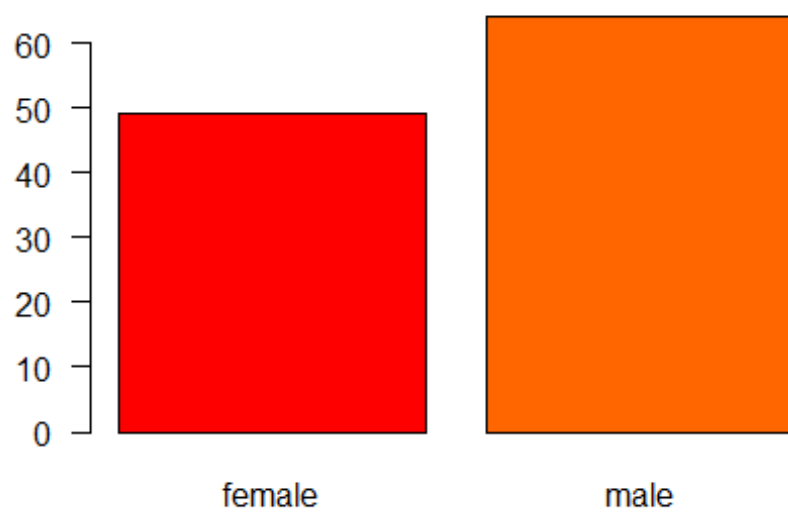
endometriosis



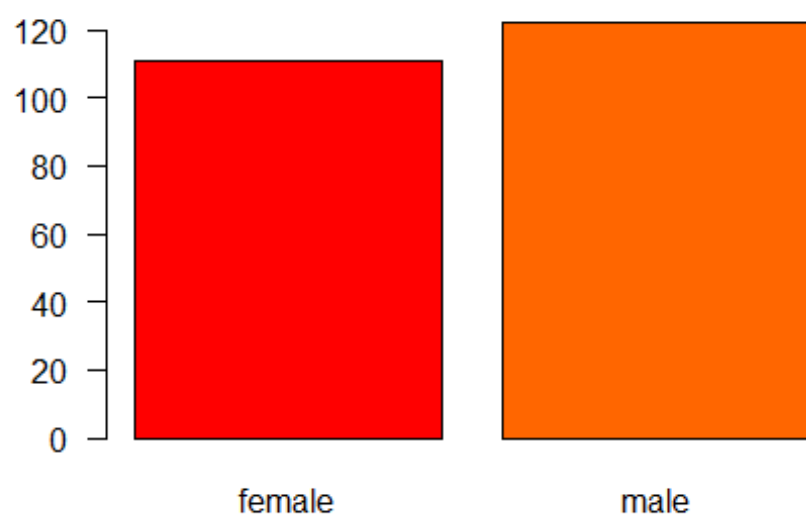
prostate cancer



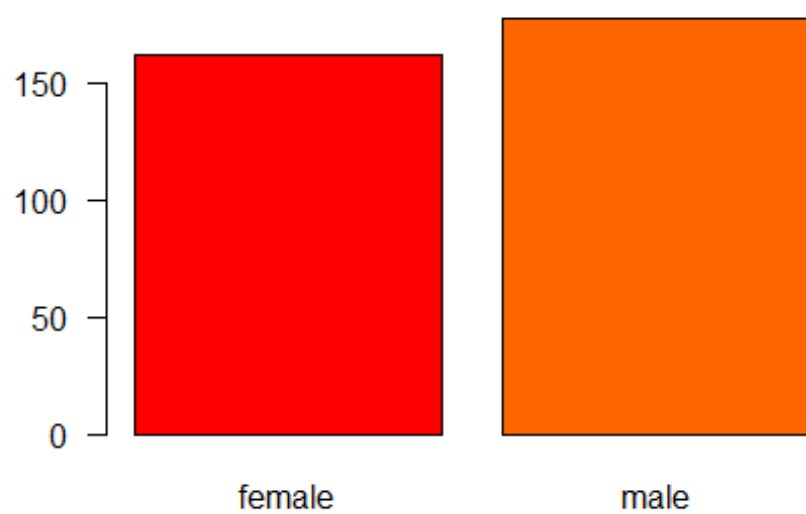
multiple sclerosis



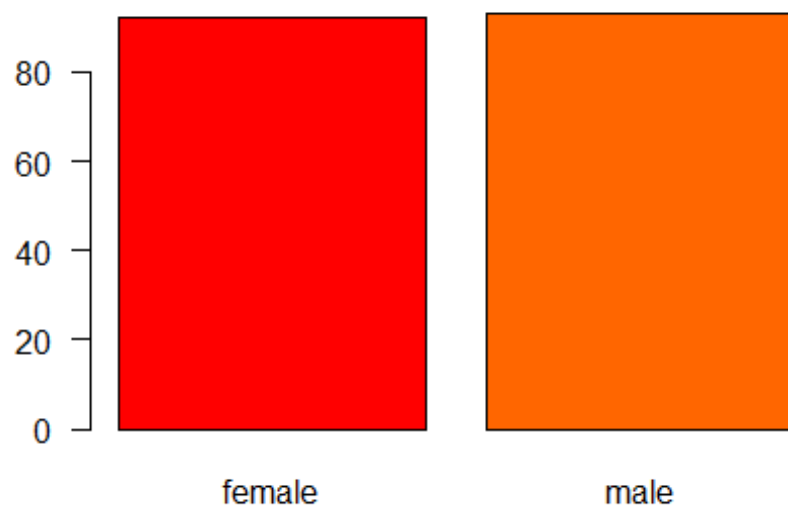
skin cancer



Alzheimer's disease



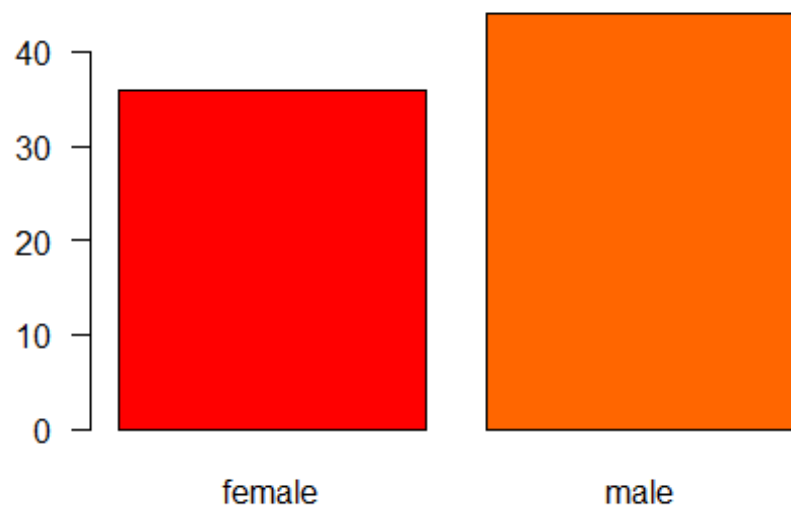
kidney disease



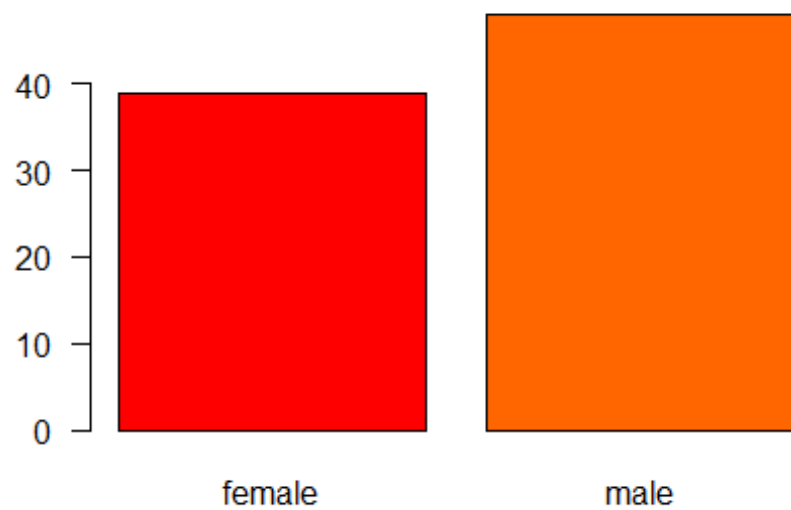
breast cancer



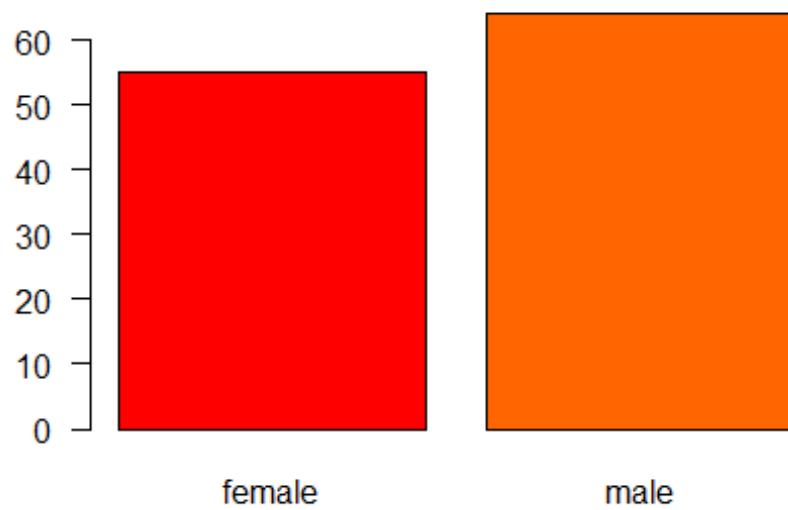
HIV/AIDS



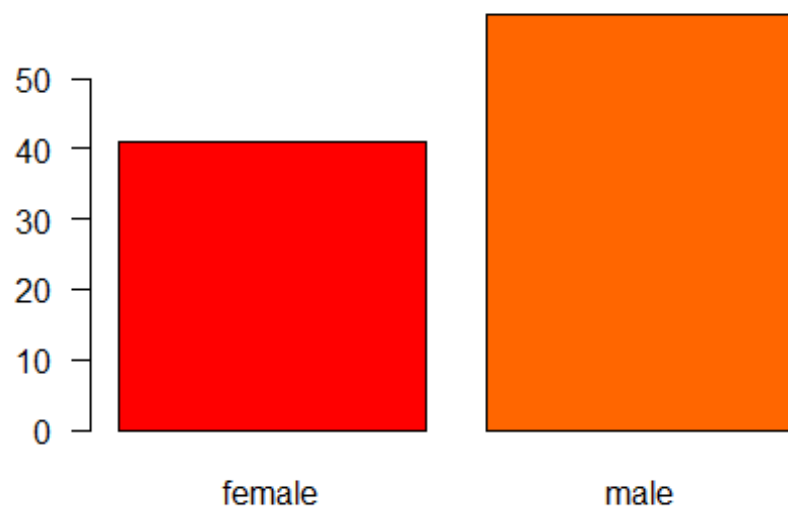
heart disease

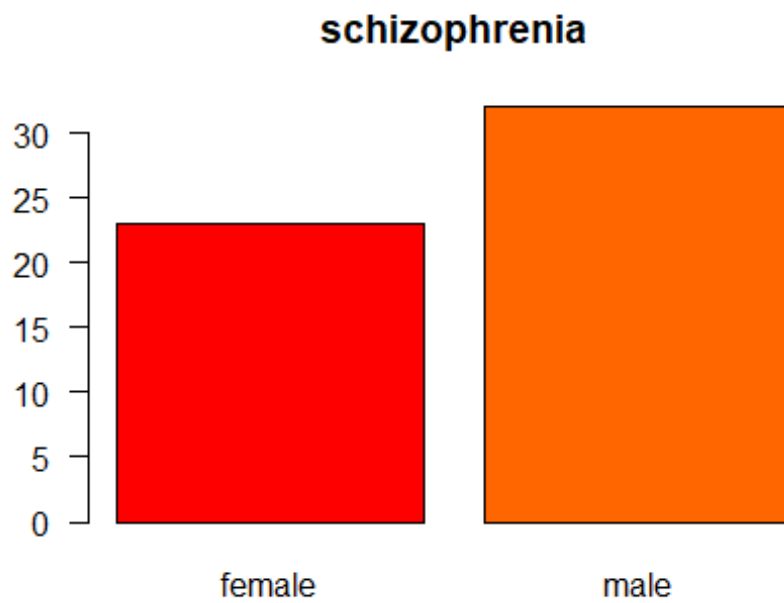


diabetes



gastritis

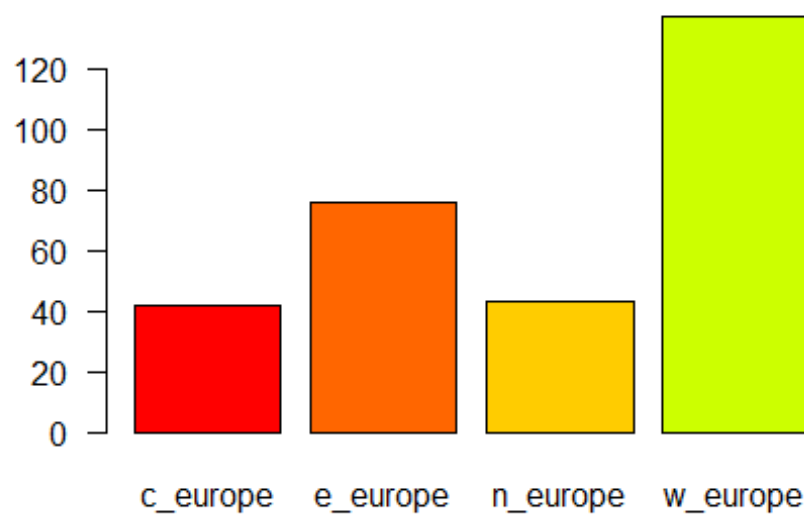




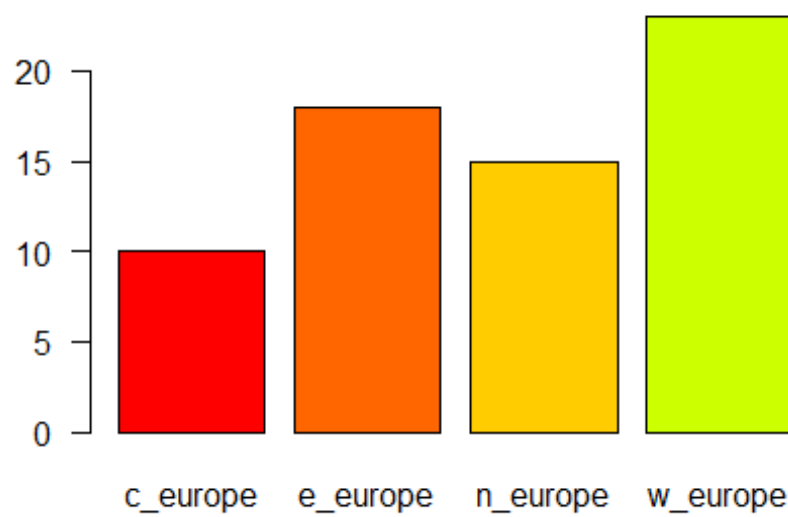
Disease and ancestry breakdown

```
for (d in disease_name) {  
  ancestry_disease_counts <- subset(patients, patients$disease == d)  
  ancestry_disease_counts <- table(ancestry_disease_counts$ancestry)  
  barplot(ancestry_disease_counts, main=d, col=rainbow(15), las=1)  
}
```

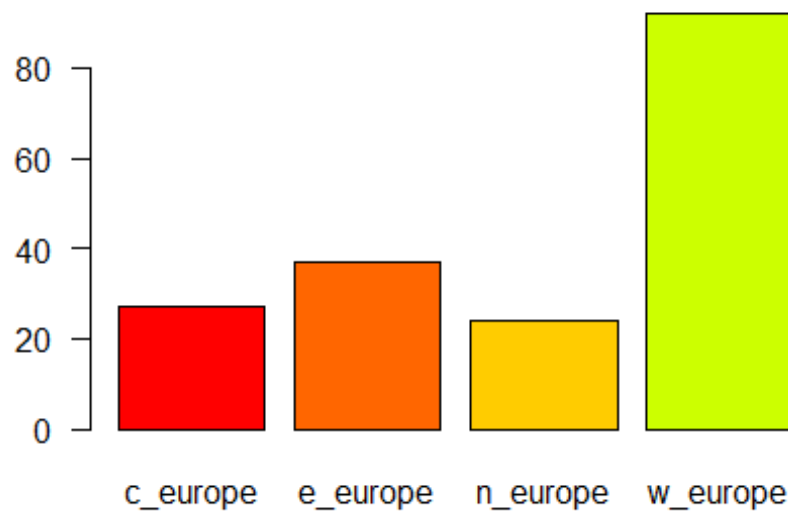

hypertension



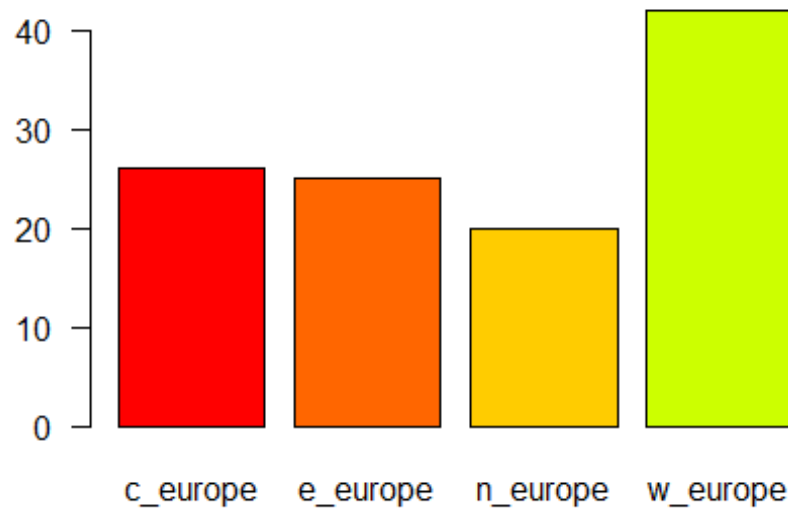
endometriosis



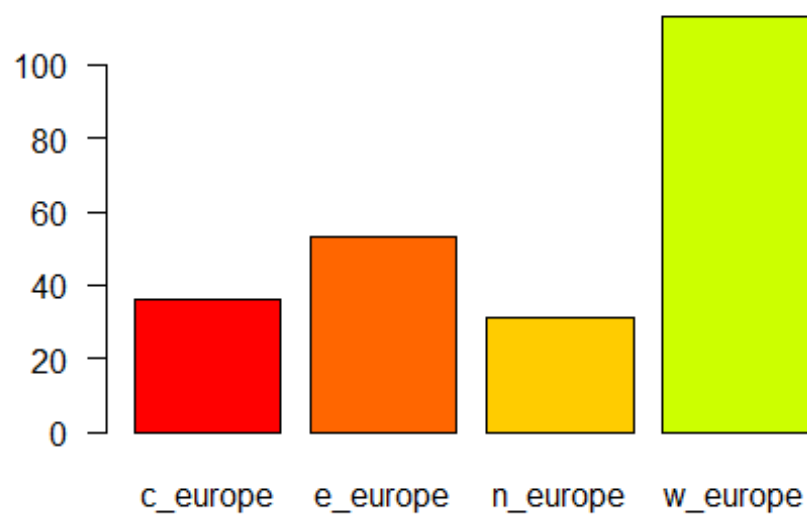
prostate cancer



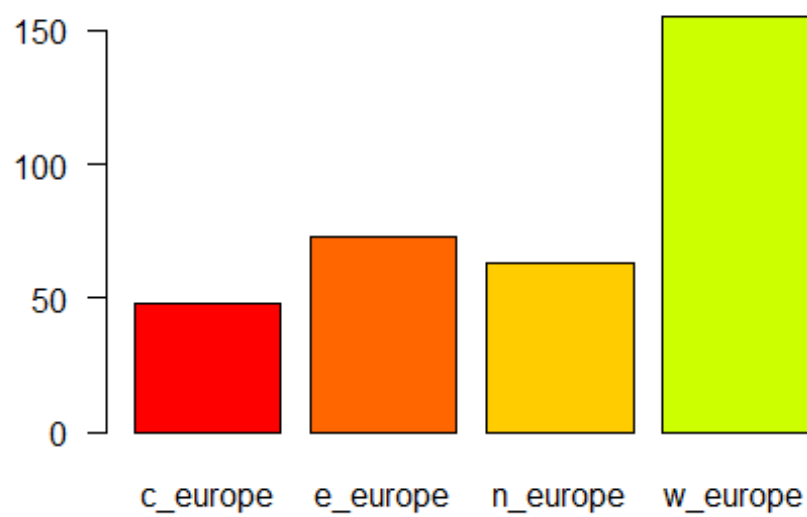
multiple sclerosis



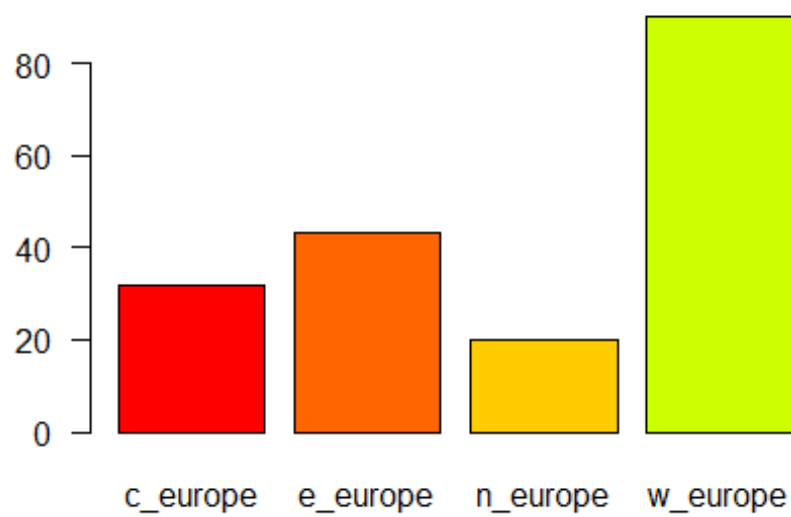
skin cancer



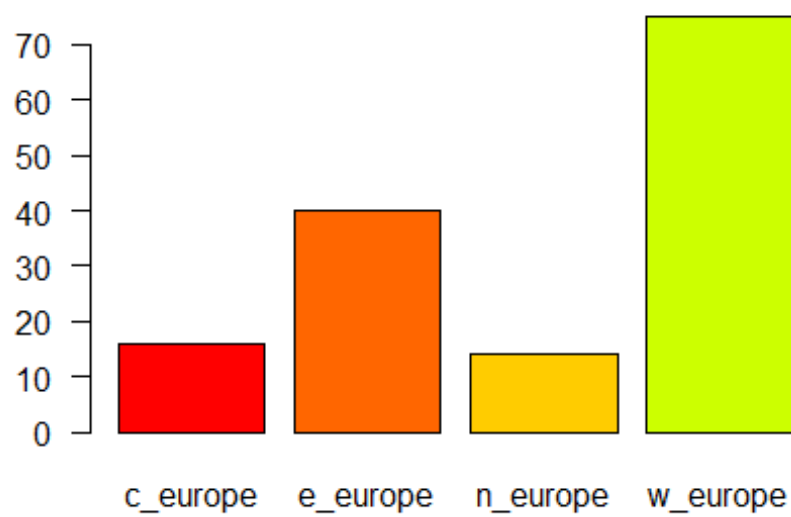
Alzheimer's disease



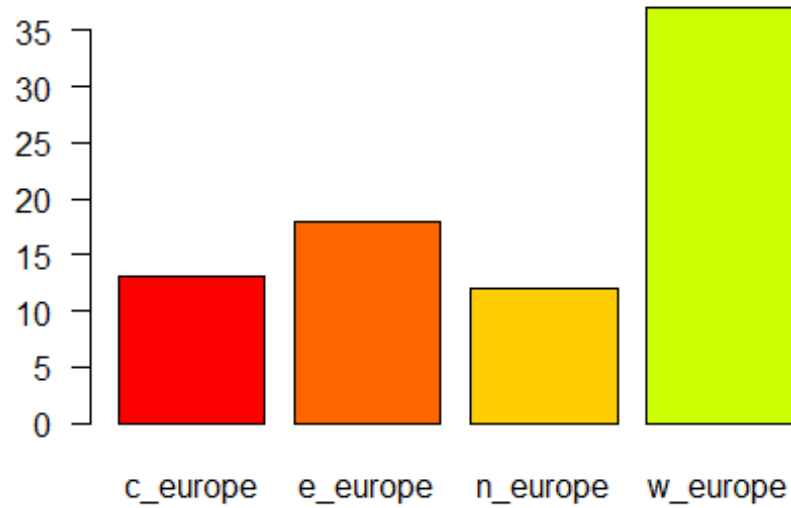
kidney disease



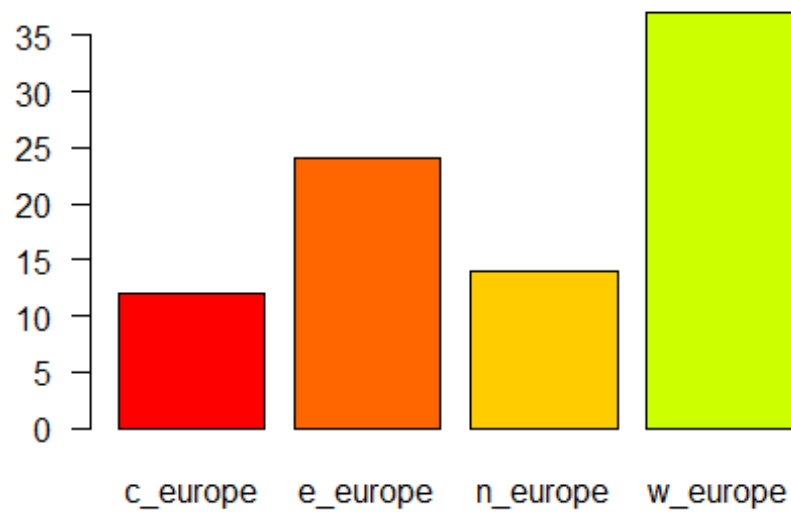
breast cancer



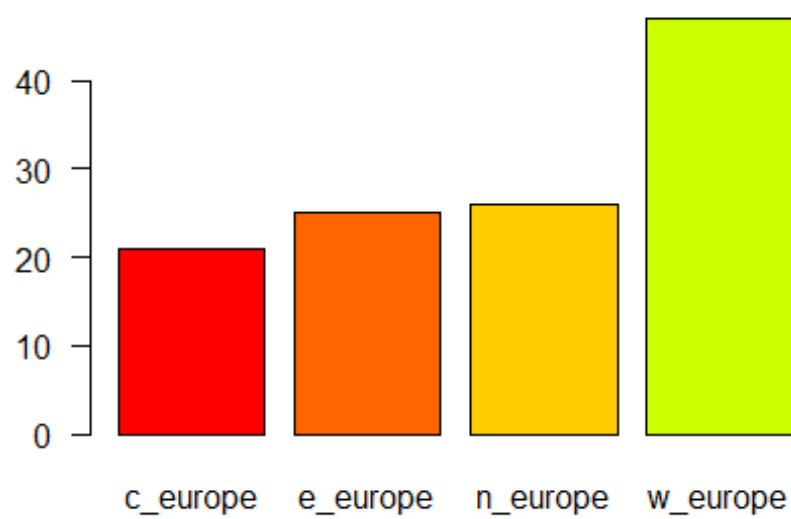
HIV/AIDS



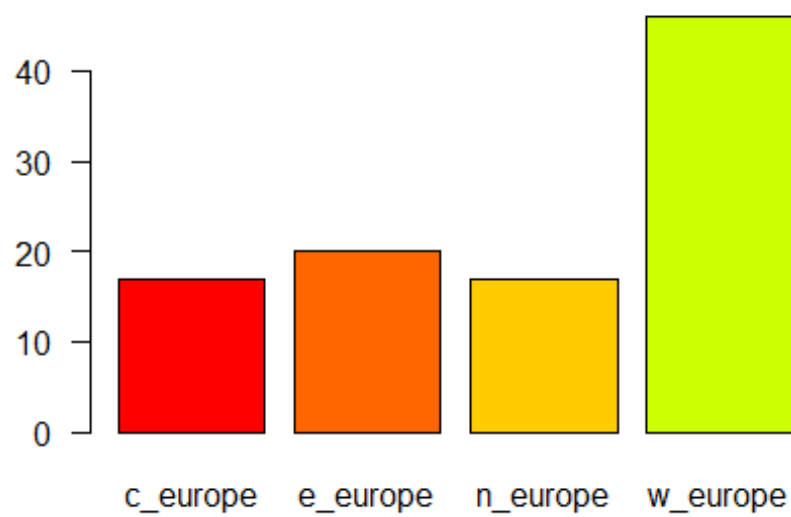
heart disease

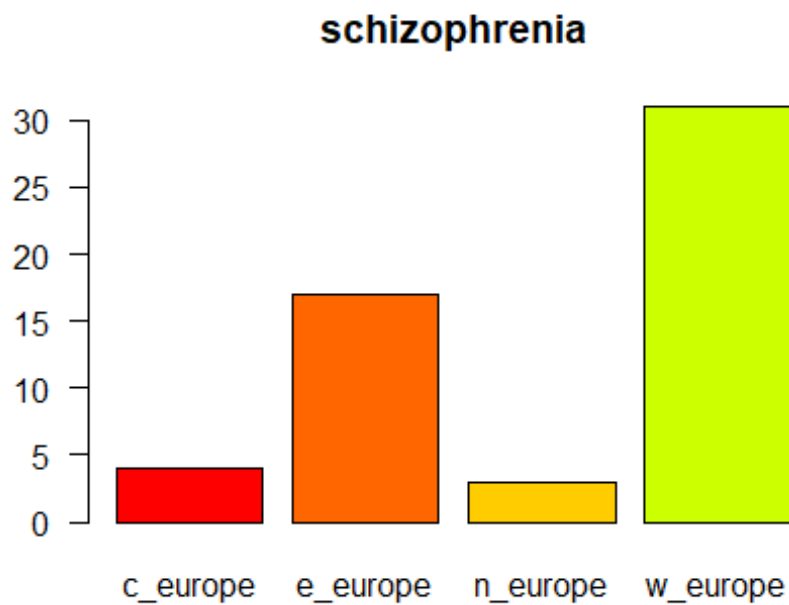


diabetes



gastritis



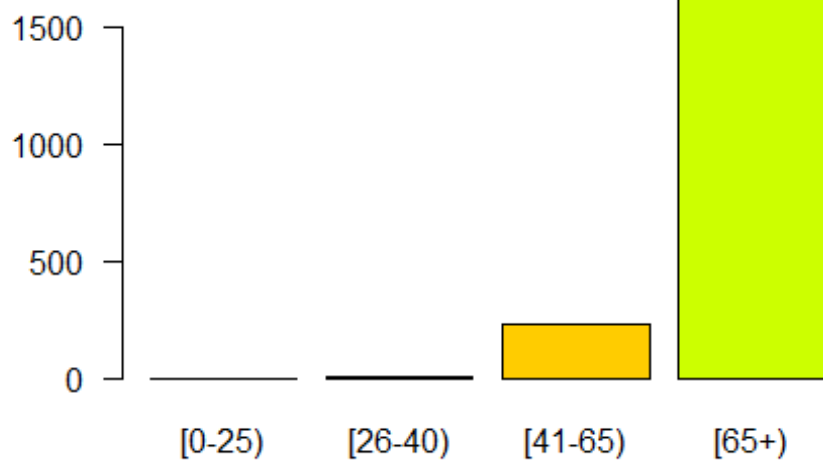


Barplots for dependent variables

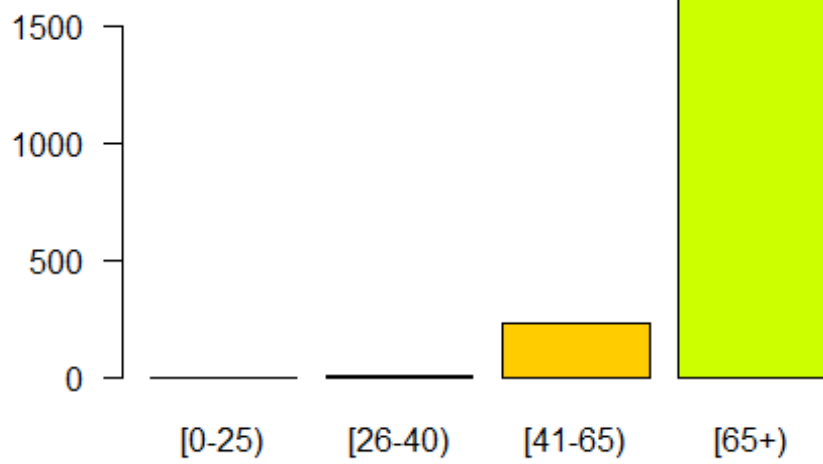
Age and disease distribution

```
for (d in disease_name) {  
  age_disease_counts <- subset(patients, patients$disease == d)  
  #age_disease_counts <- table(age_disease_counts$age_group_tags)  
  age_disease_counts <- table(age_disease_counts$age)  
  barplot(age_counts, main=d, col=rainbow(15), las=1)  
}
```

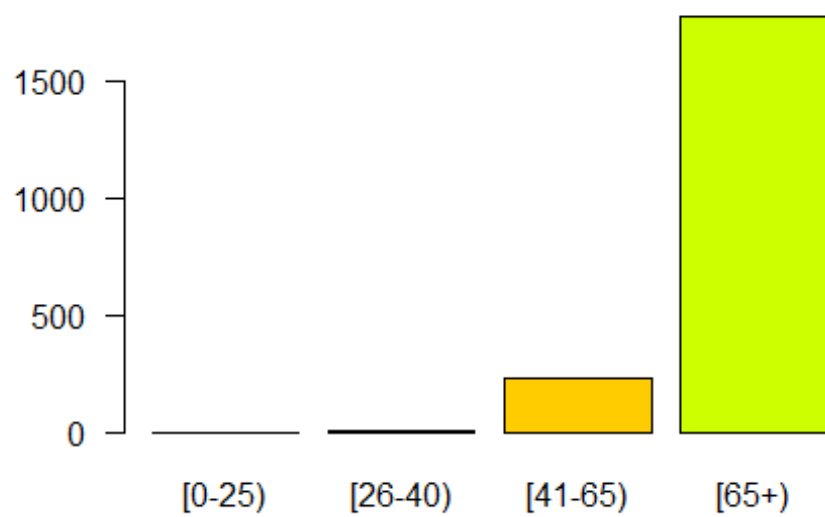
hypertension



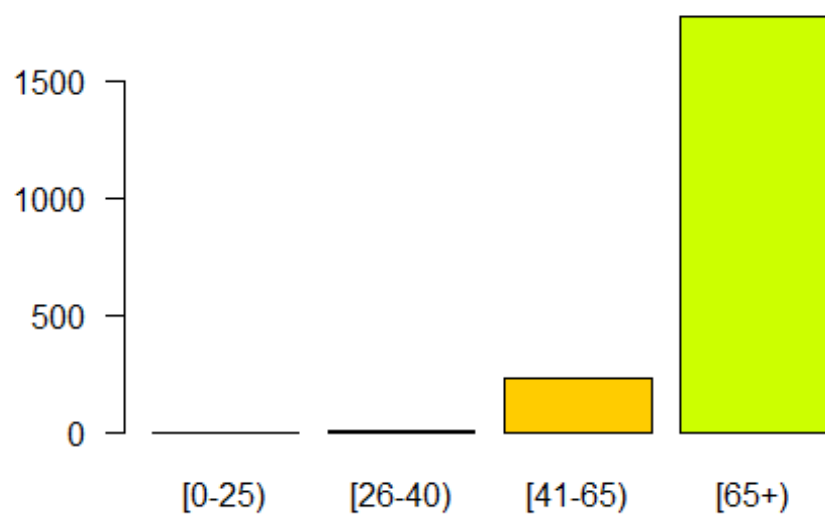
endometriosis



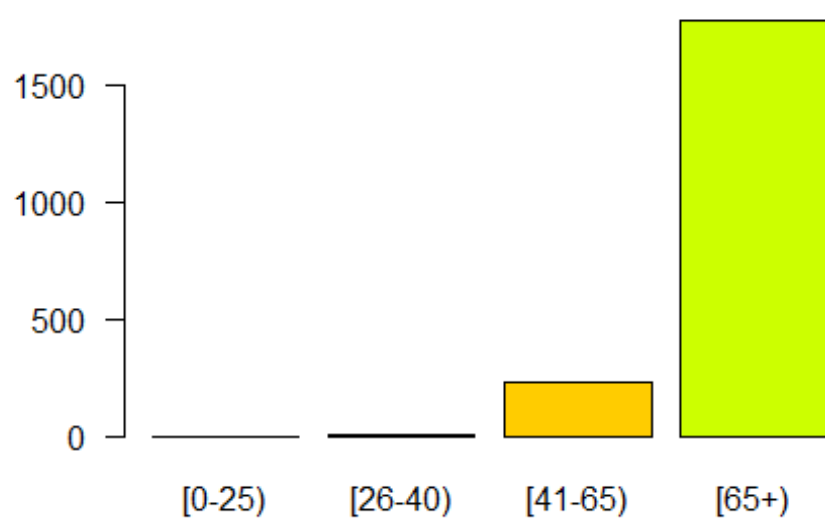
prostate cancer



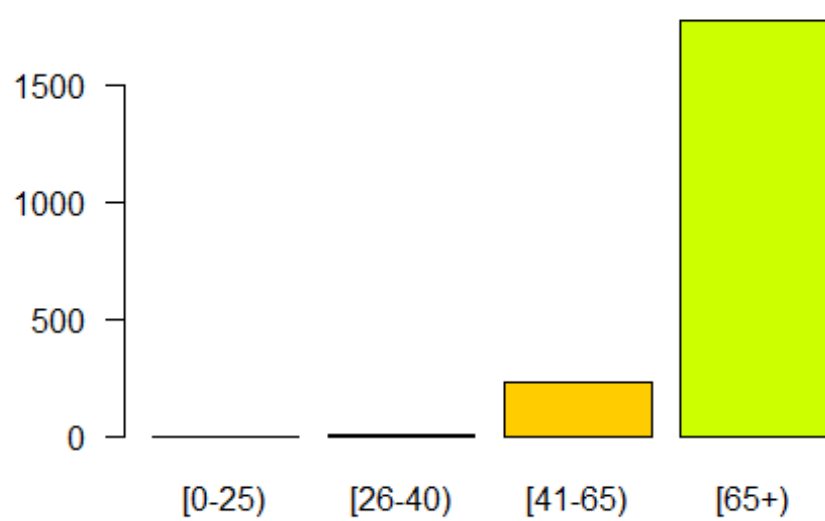
multiple sclerosis



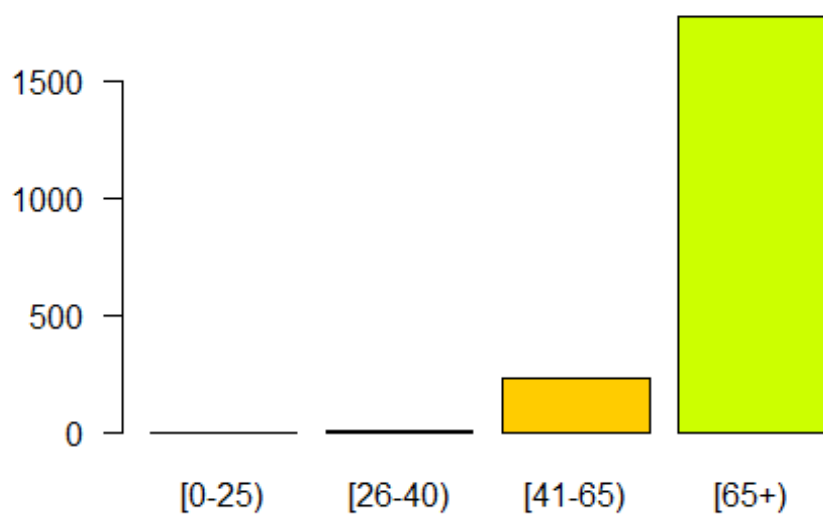
skin cancer



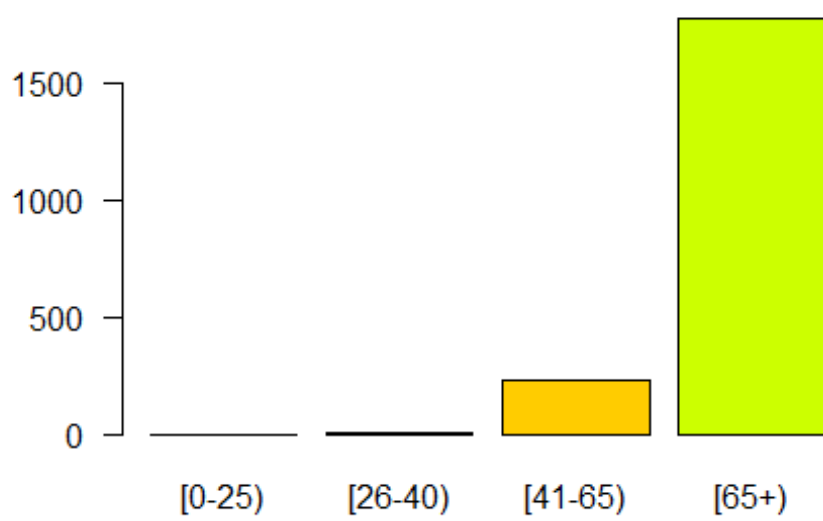
Alzheimer's disease



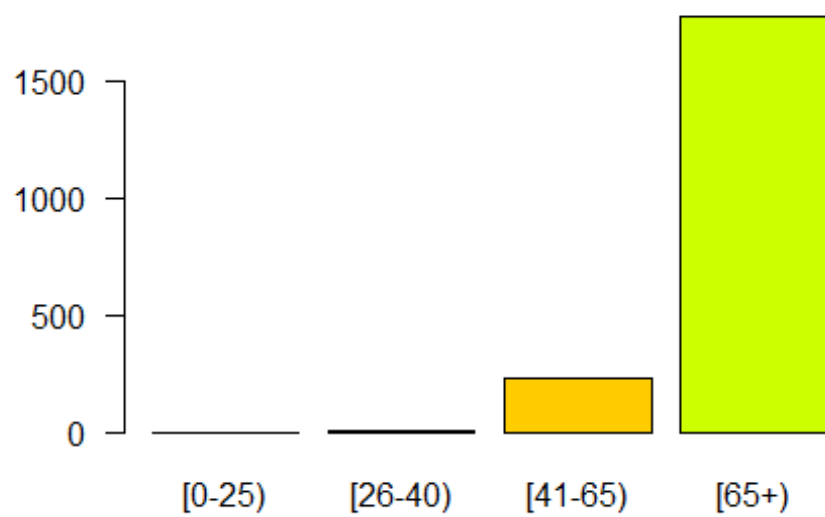
kidney disease



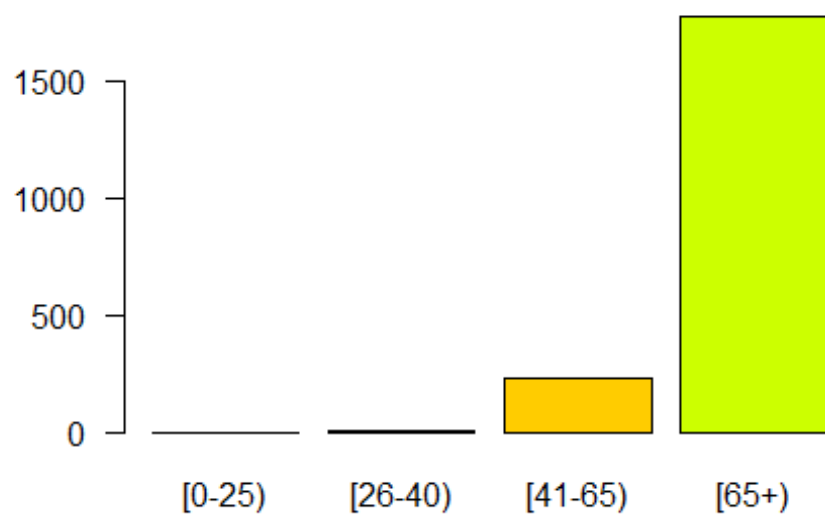
breast cancer



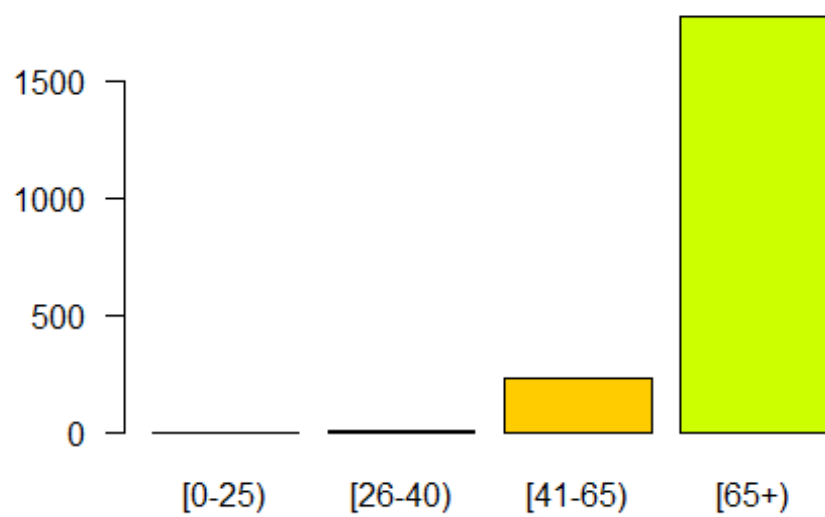
HIV/AIDS



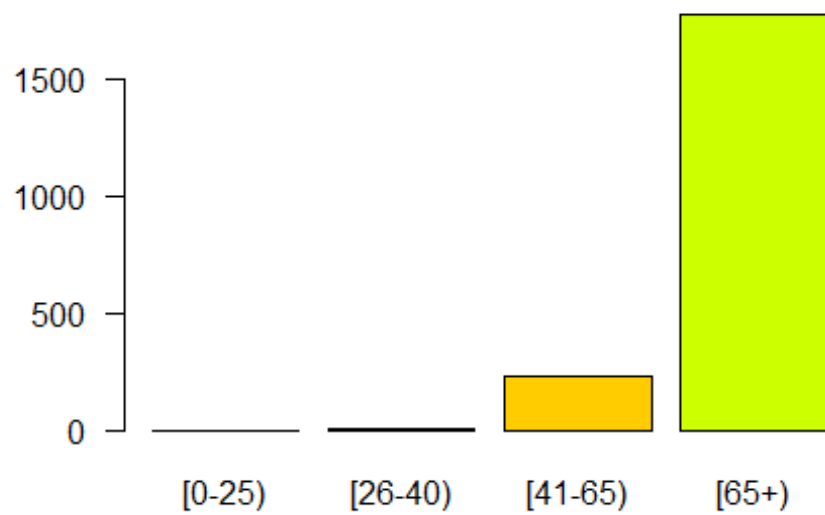
heart disease

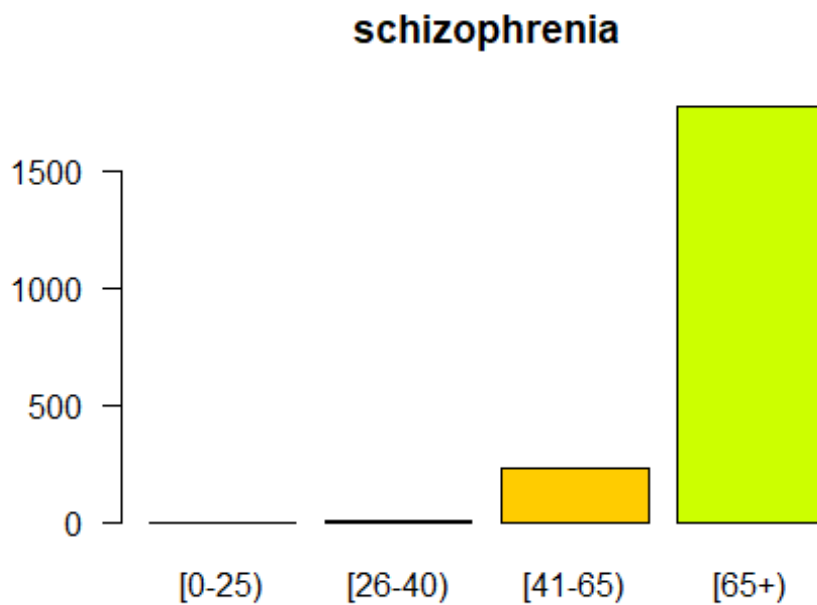


diabetes



gastritis

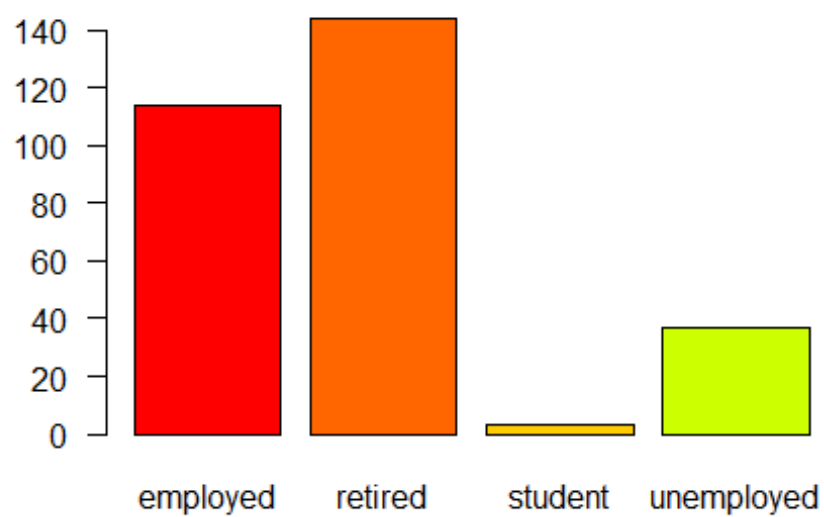




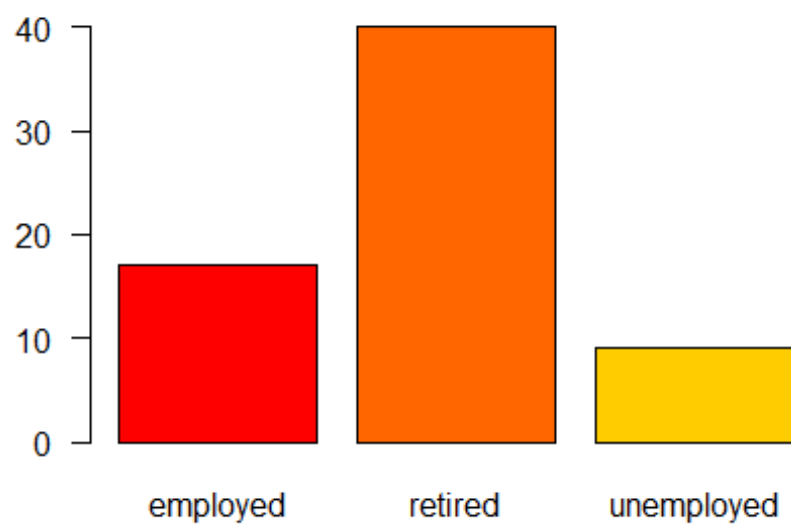
Employment and disease distribution

```
for (d in disease_name) {  
  emp_disease_counts <- subset(patients, patients$disease == d)  
  emp_disease_counts <- table(emp_disease_counts$employment_status)  
  barplot(emp_disease_counts, main=d, col=rainbow(15), las=1)  
}
```

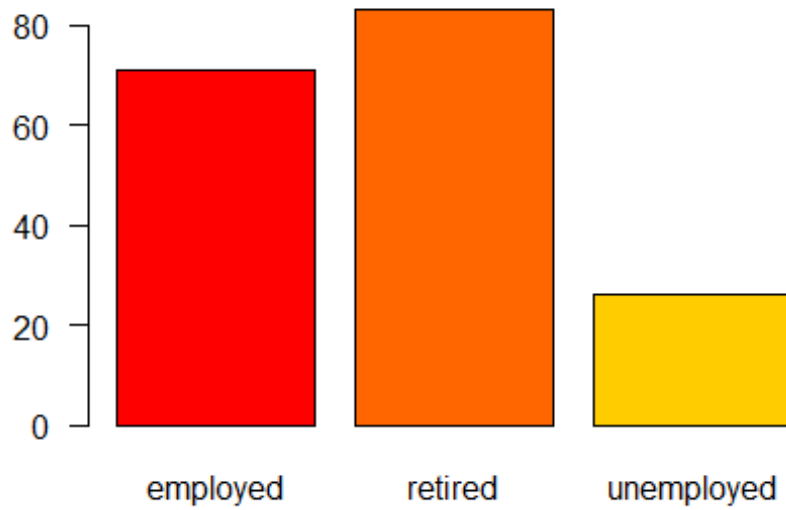
hypertension



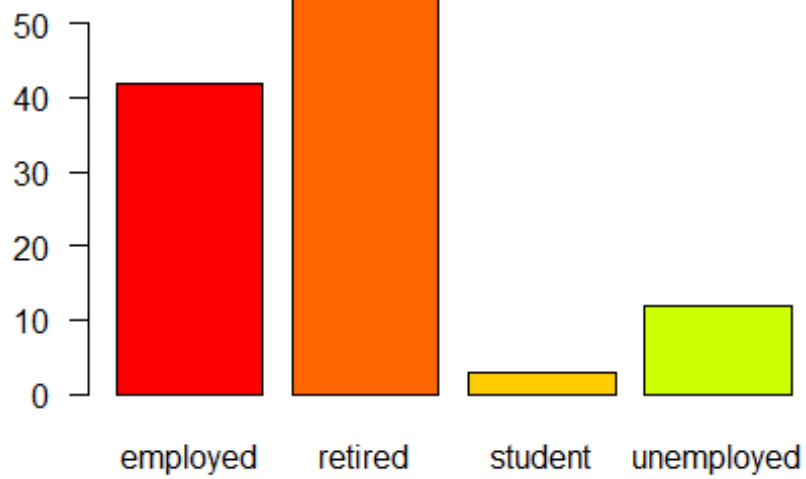
endometriosis



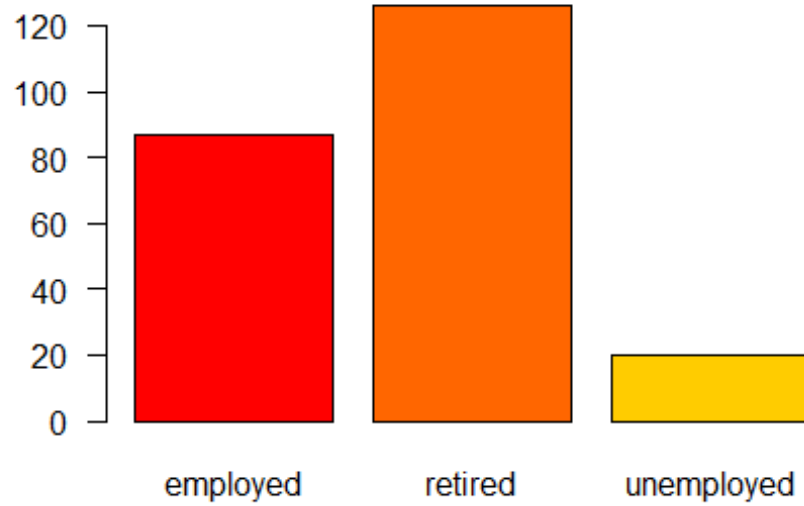
prostate cancer



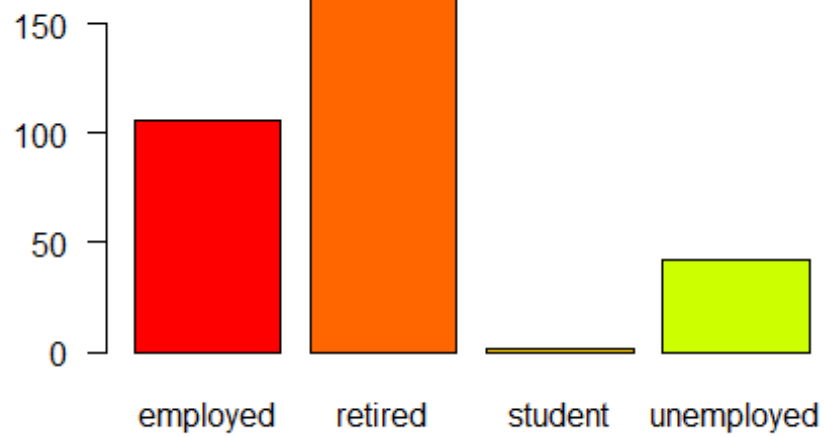
multiple sclerosis



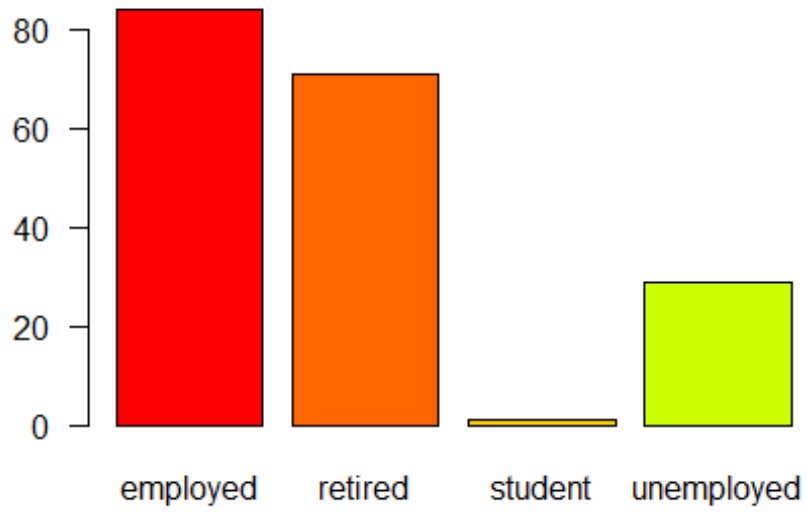
skin cancer



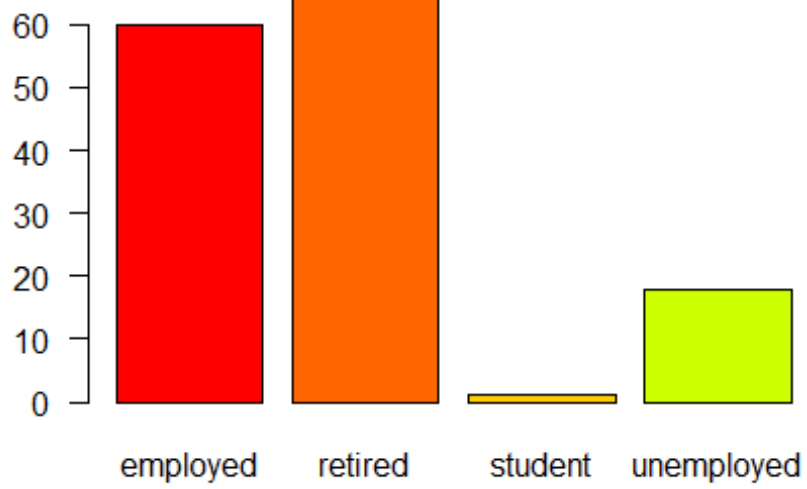
Alzheimer's disease



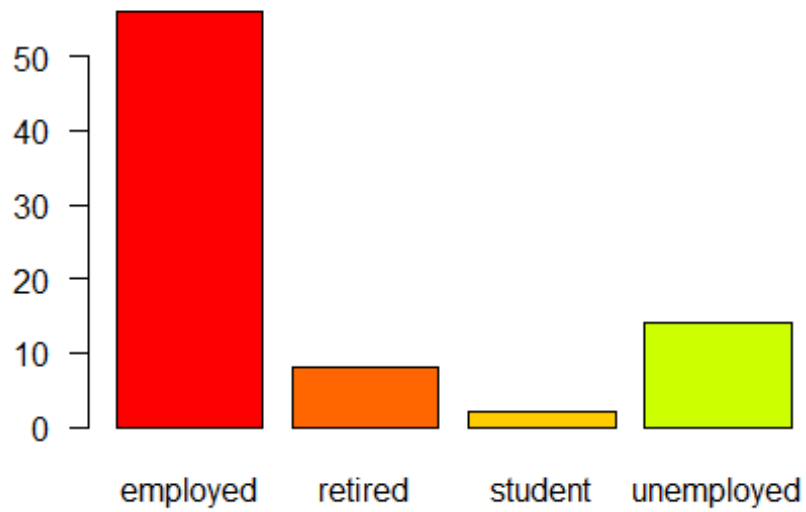
kidney disease



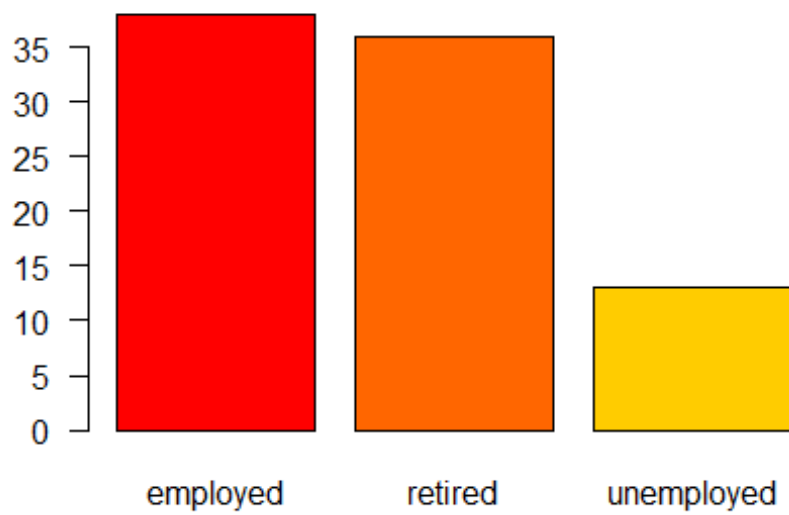
breast cancer



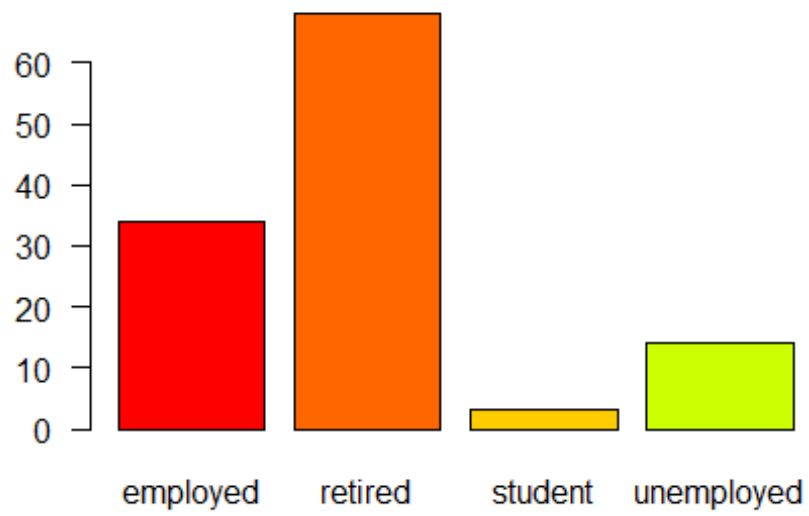
HIV/AIDS



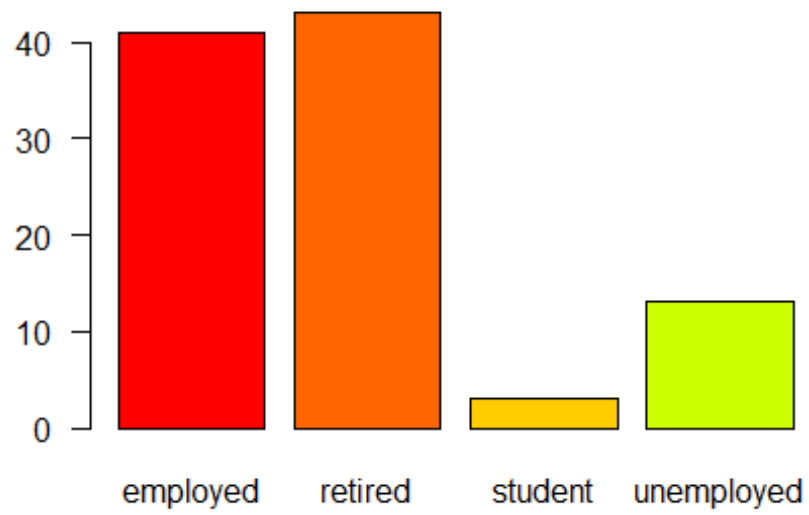
heart disease

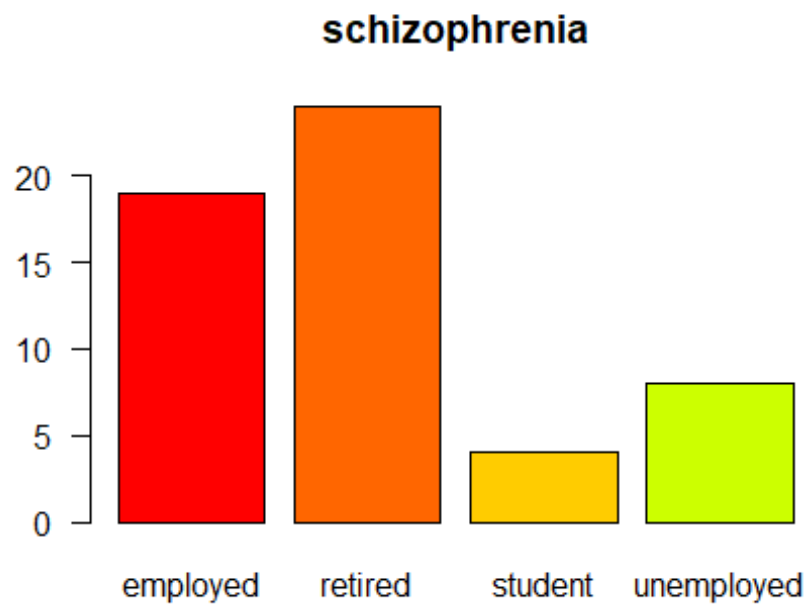


diabetes



gastritis

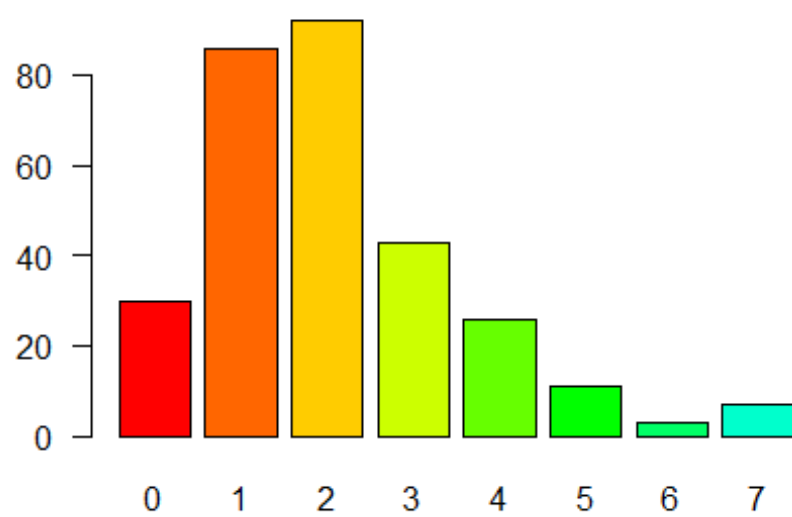




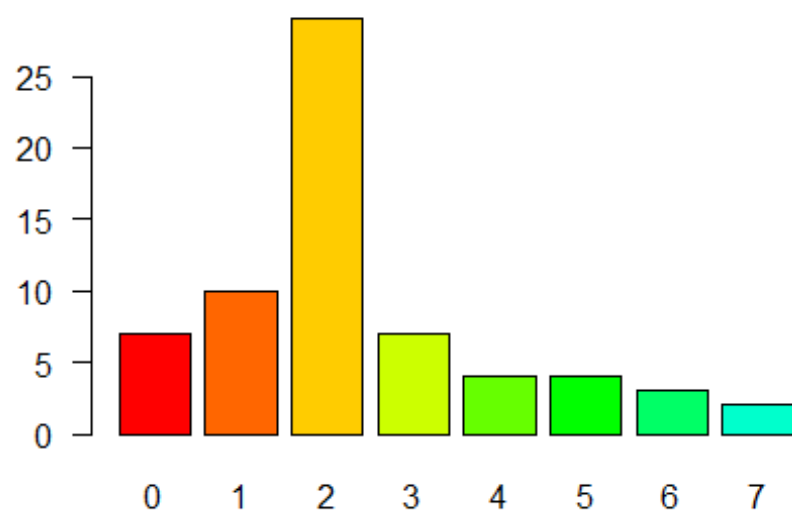
People with disease and children

```
for (d in disease_name) {  
  child_disease_counts <- subset(patients, patients$disease == d)  
  child_disease_counts <- table(child_disease_counts$children)  
  barplot(child_disease_counts, main=d, col=rainbow(15), las=1)  
}
```

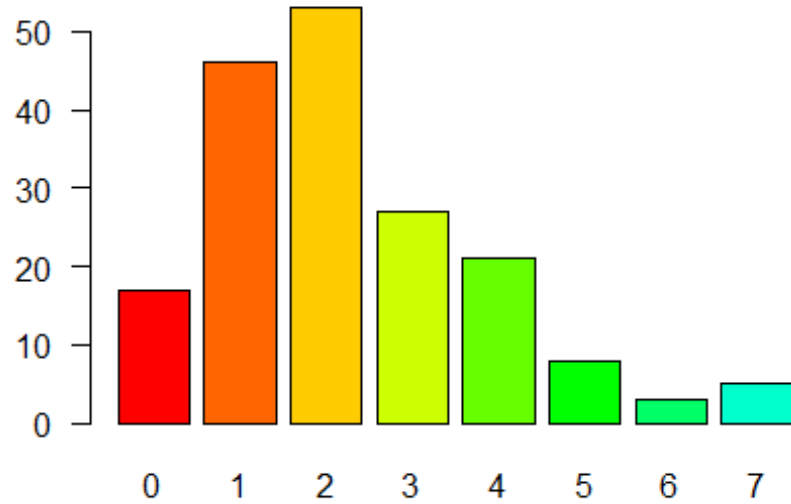
hypertension



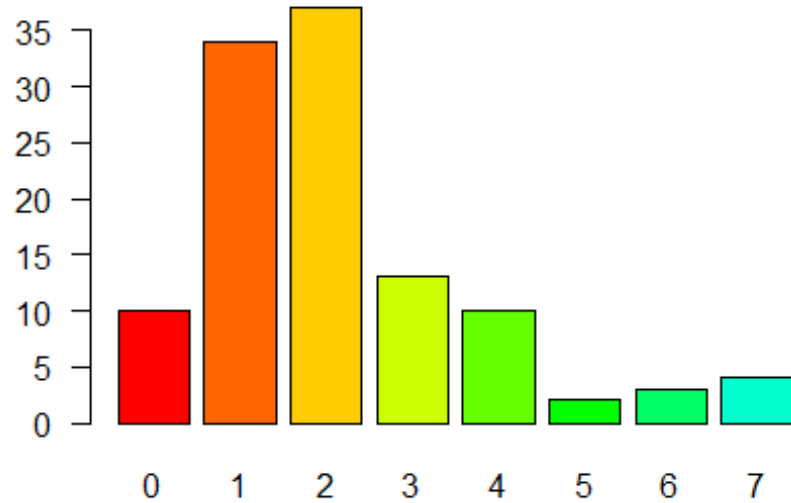
endometriosis



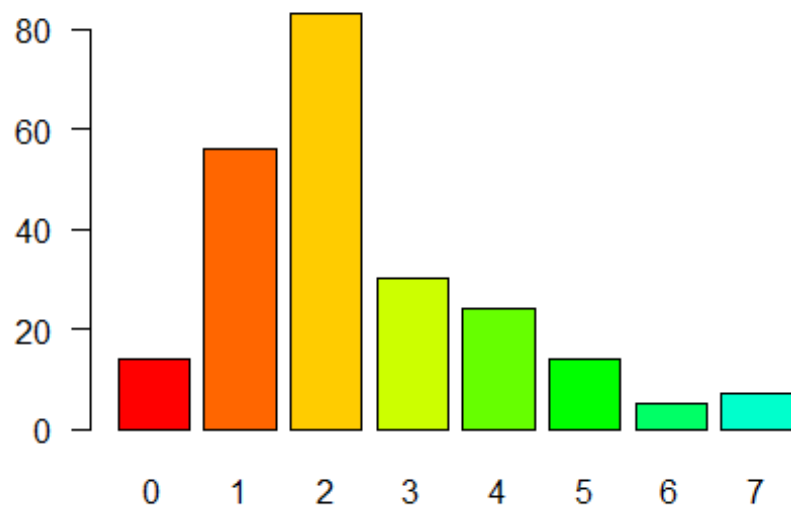
prostate cancer



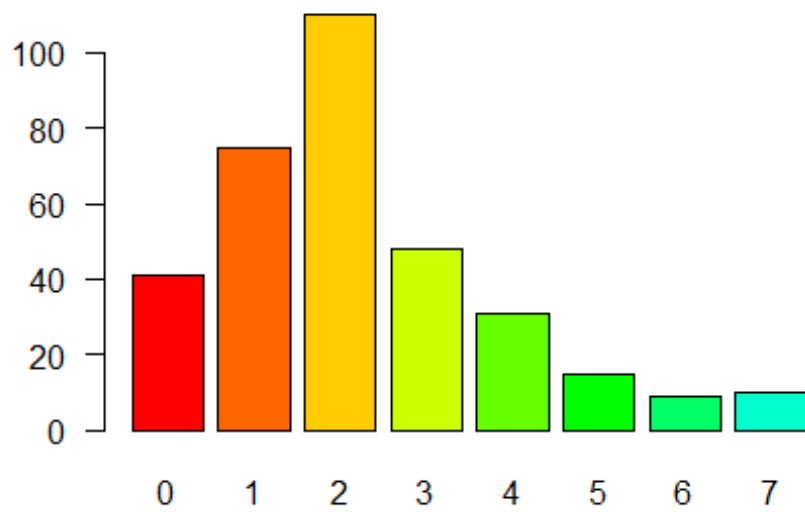
multiple sclerosis



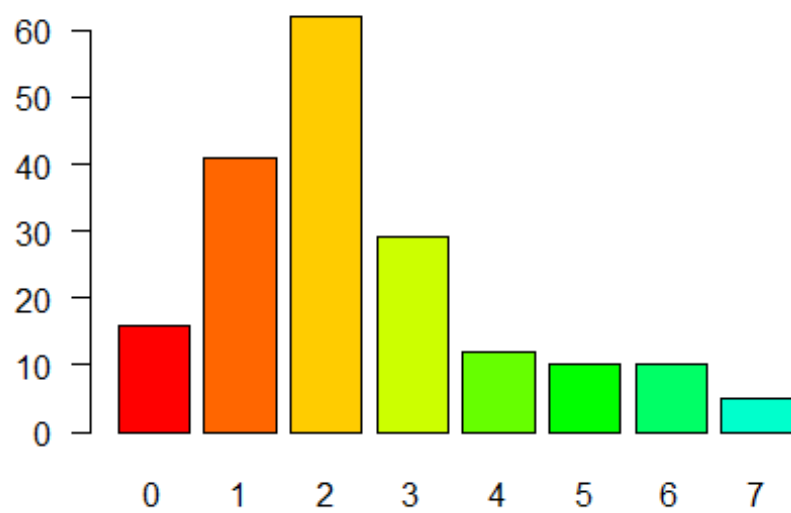
skin cancer



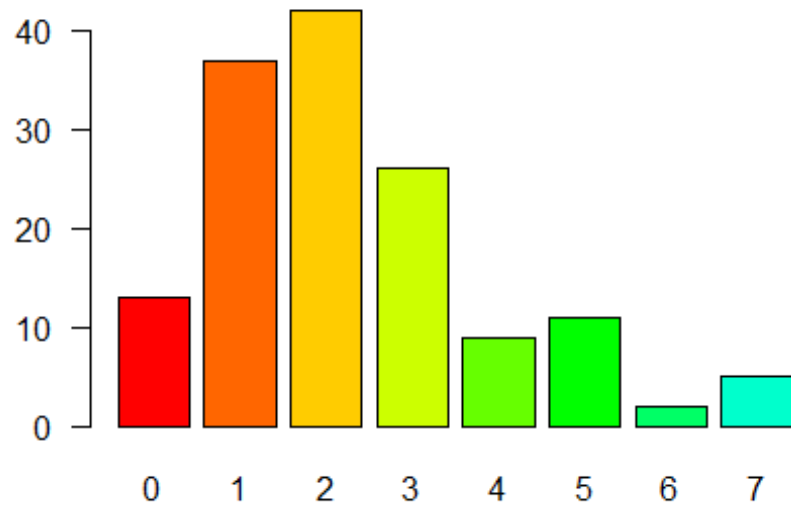
Alzheimer's disease



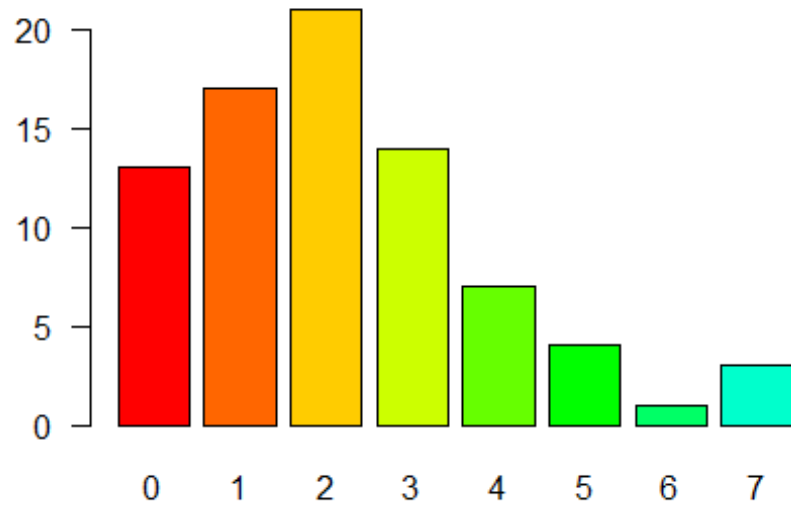
kidney disease



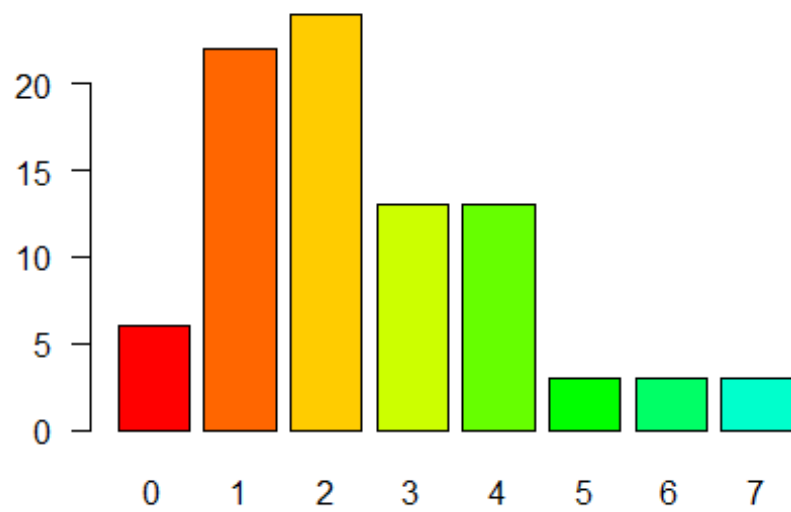
breast cancer



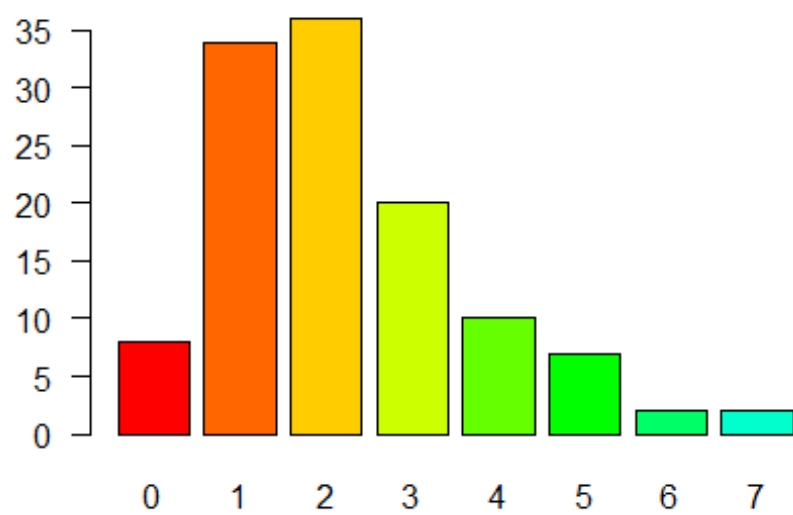
HIV/AIDS



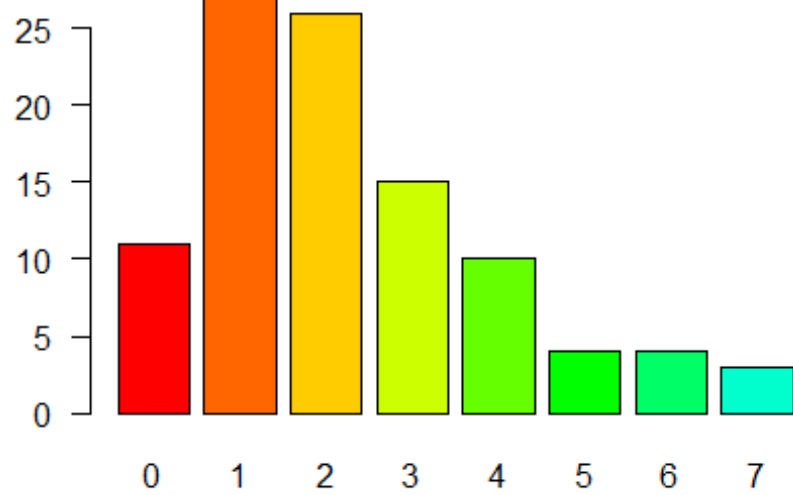
heart disease

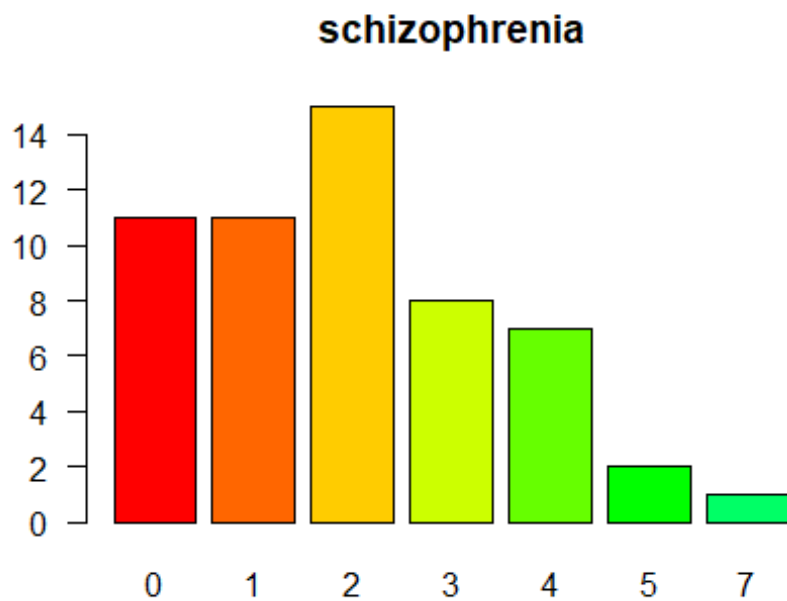


diabetes



gastritis

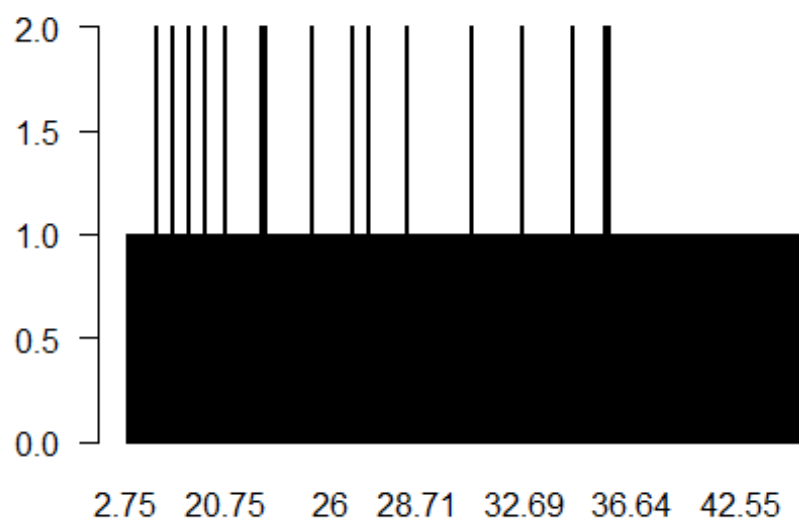




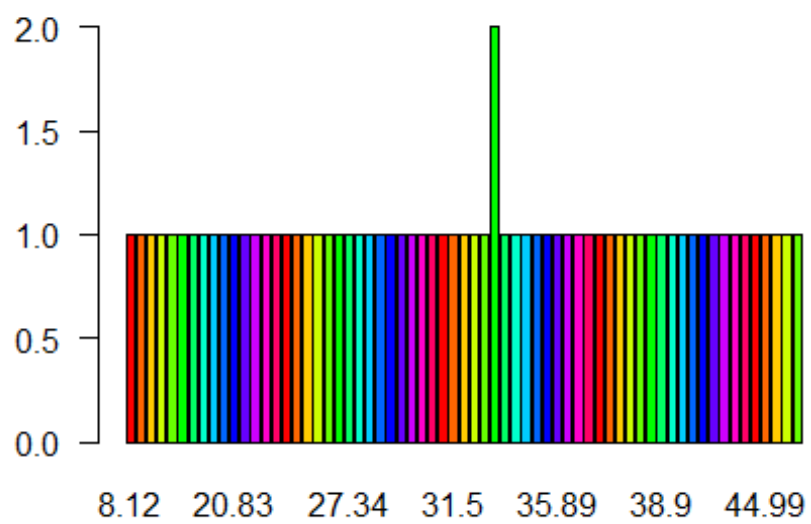
Average commute and disease breakdown

```
for (d in disease_name) {  
  comm_disease_counts <- subset(patients, patients$disease == d)  
  comm_disease_counts <- table(comm_disease_counts$avg_commute)  
  barplot(comm_disease_counts, main=d, col=rainbow(15), las=1)  
}
```

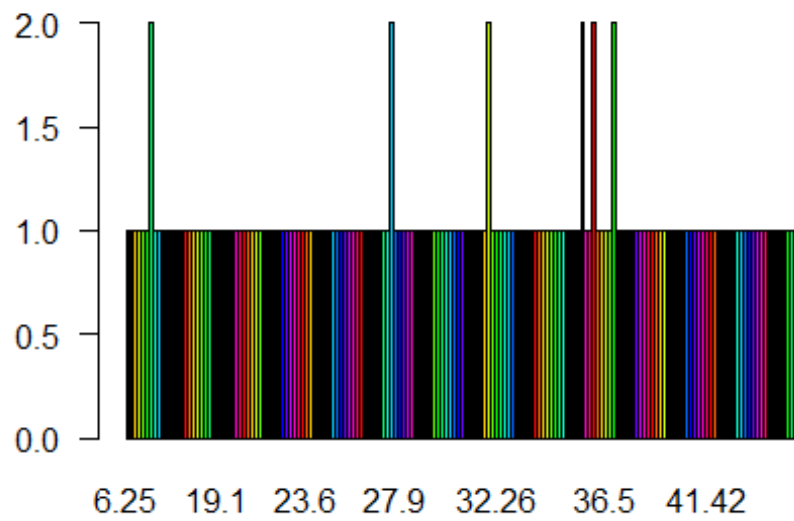
hypertension



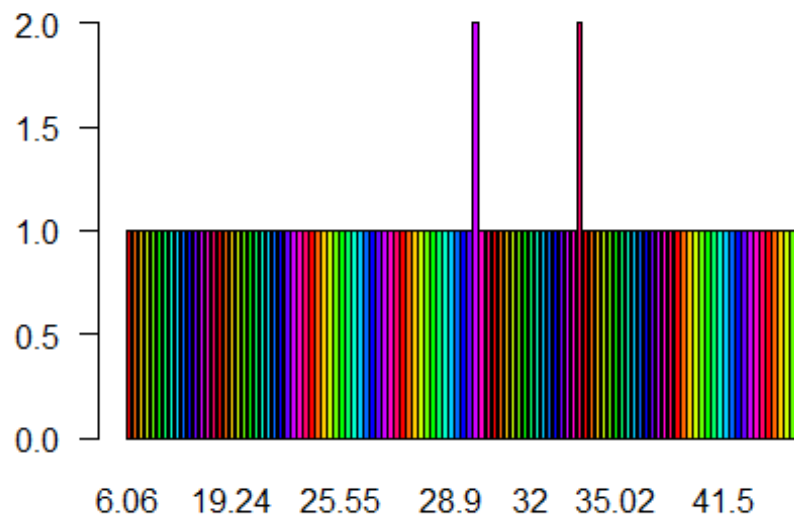
endometriosis



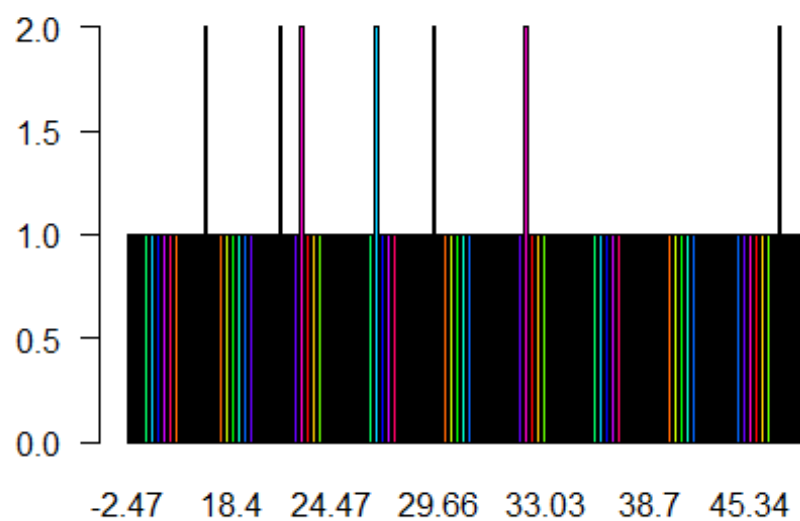
prostate cancer



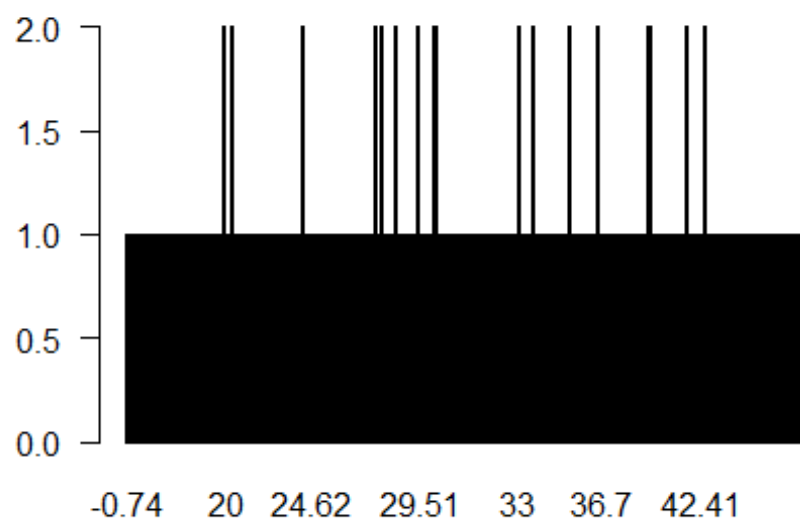
multiple sclerosis



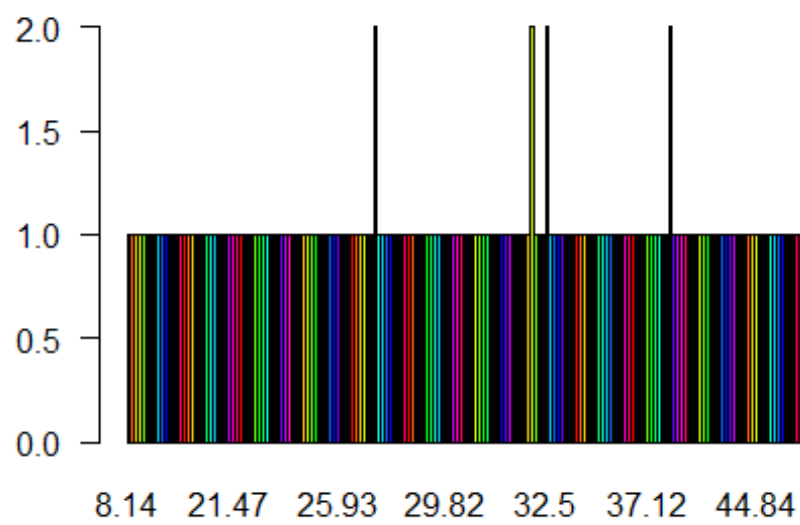
skin cancer



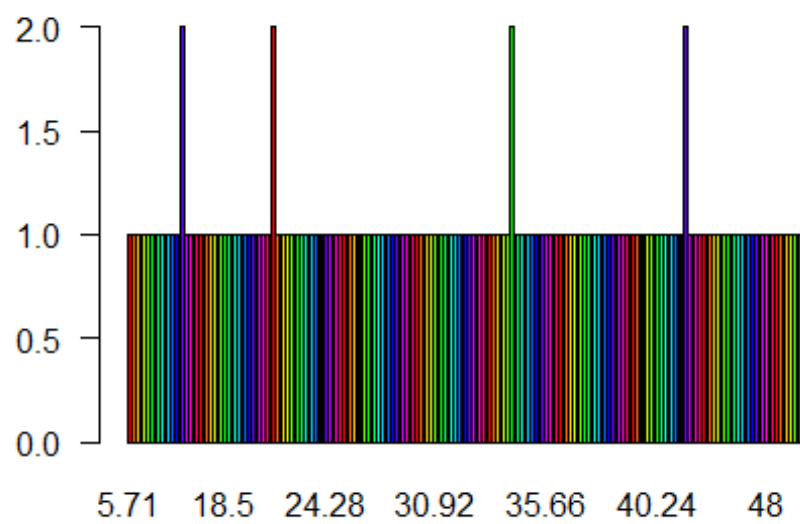
Alzheimer's disease



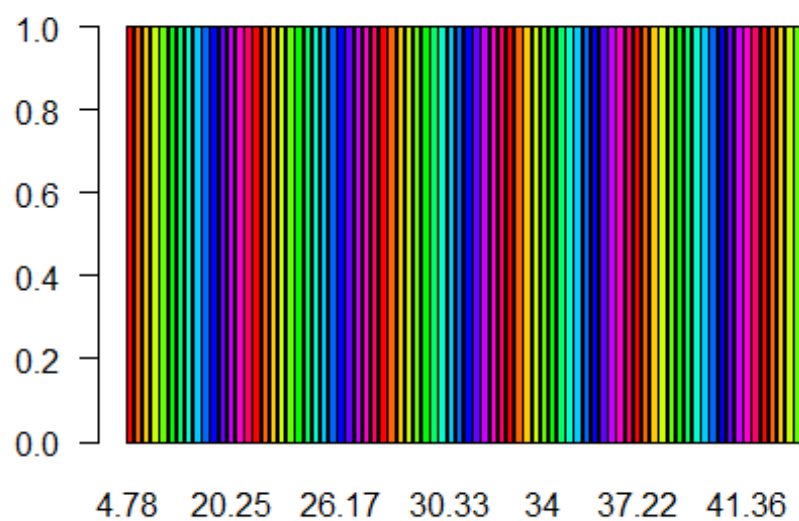
kidney disease



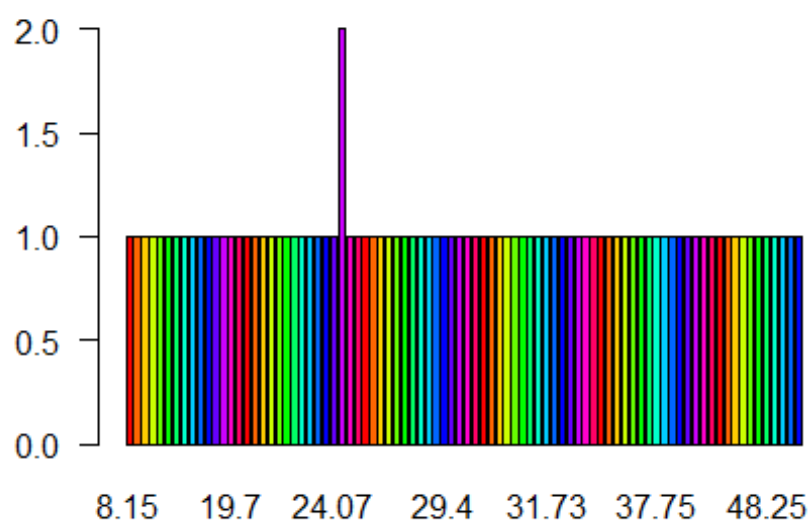
breast cancer



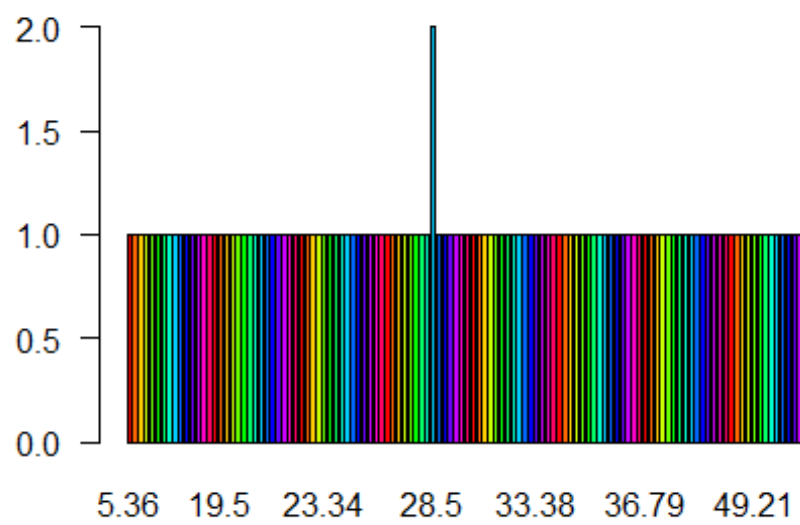
HIV/AIDS



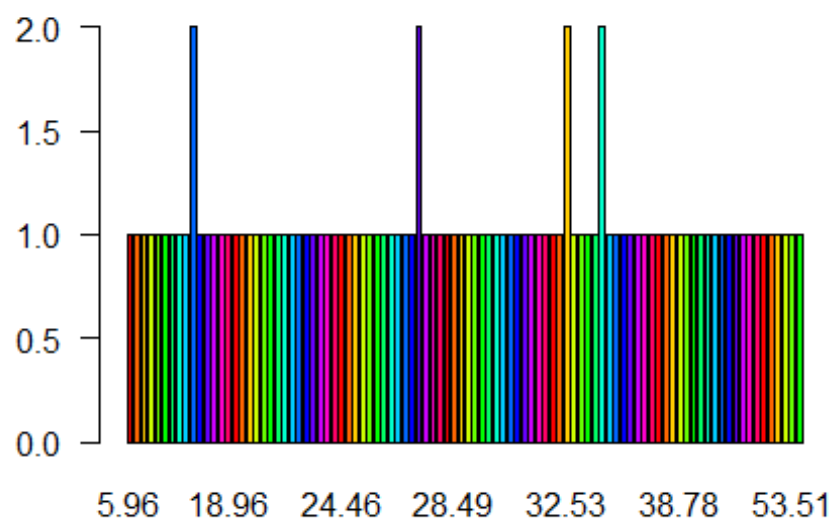
heart disease

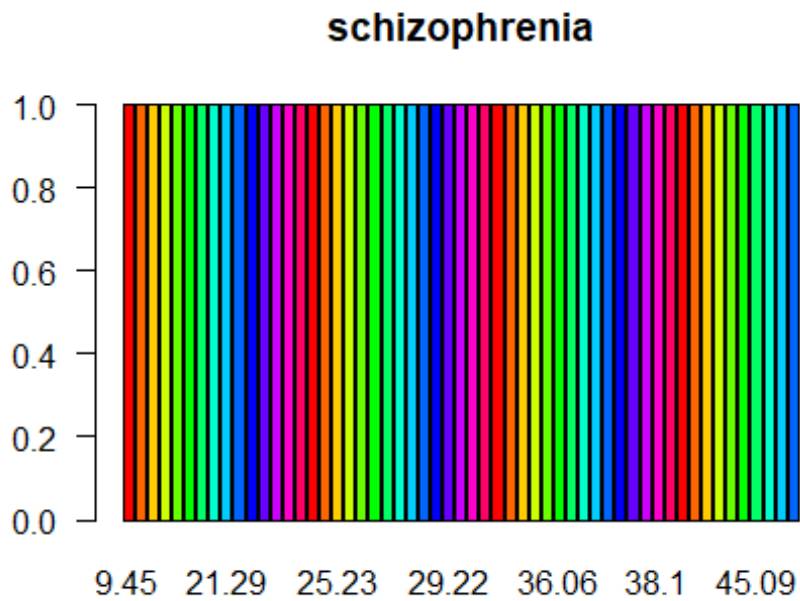


diabetes



gastritis

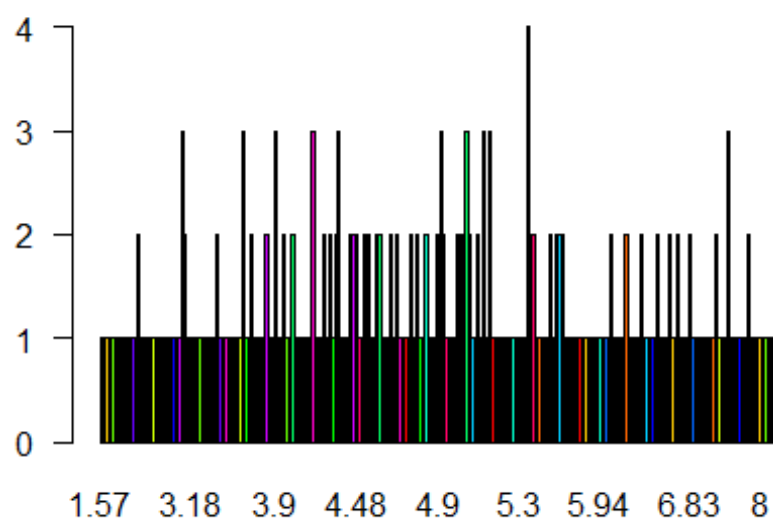




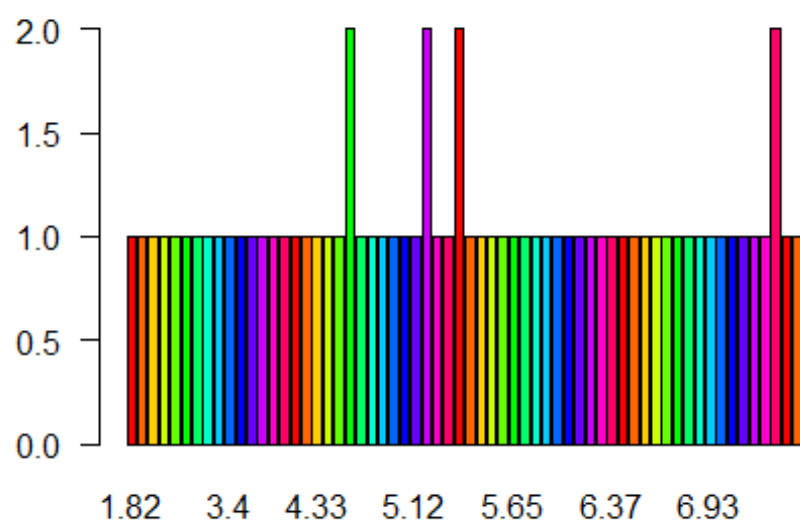
Internet usage and disease breakdown

```
for (d in disease_name) {  
  net_disease_counts <- subset(patients, patients$disease == d)  
  net_disease_counts <- table(net_disease_counts$daily_internet_use)  
  barplot(net_disease_counts, main=d, col=rainbow(15), las=1)  
}
```

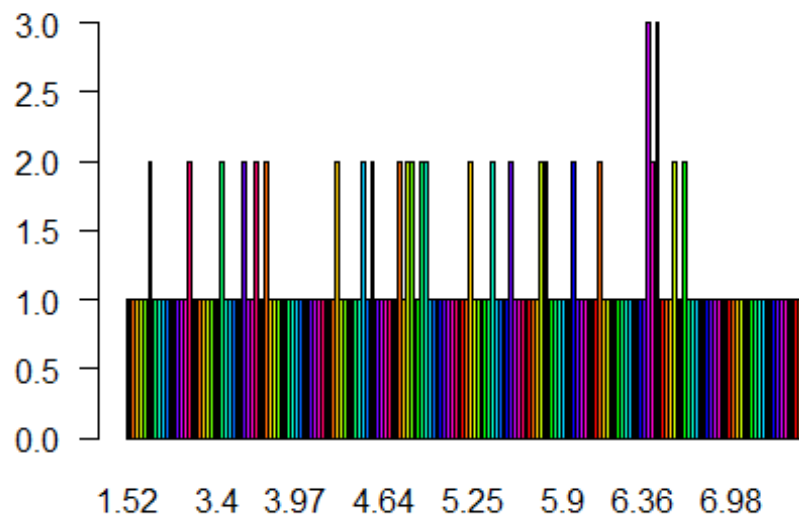
hypertension



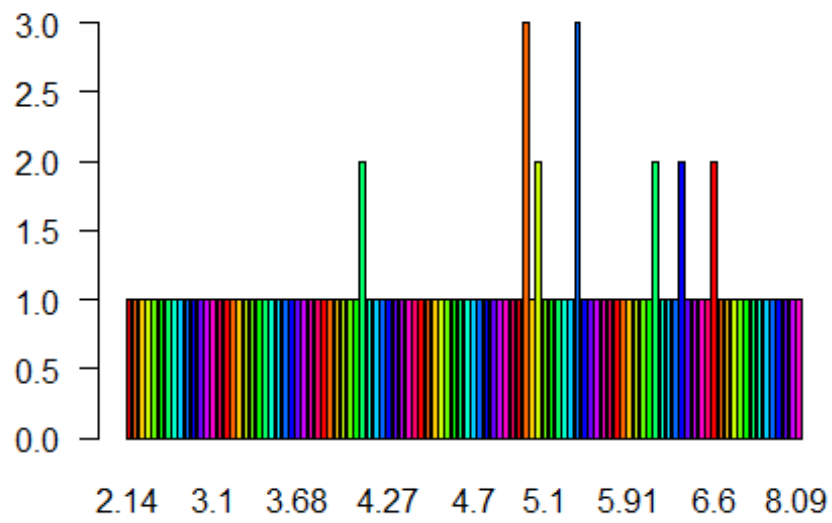
endometriosis



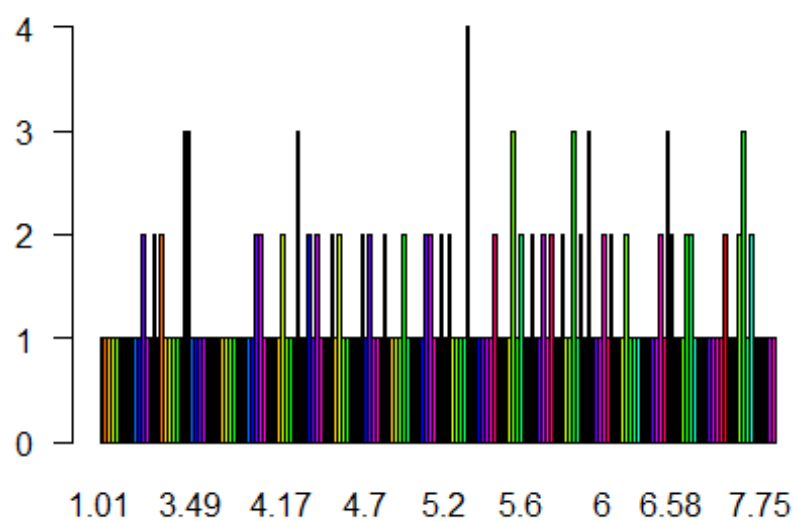
prostate cancer



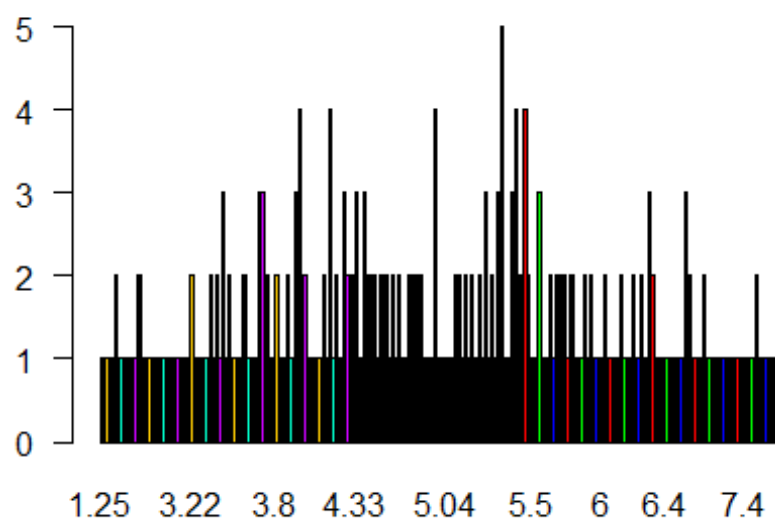
multiple sclerosis



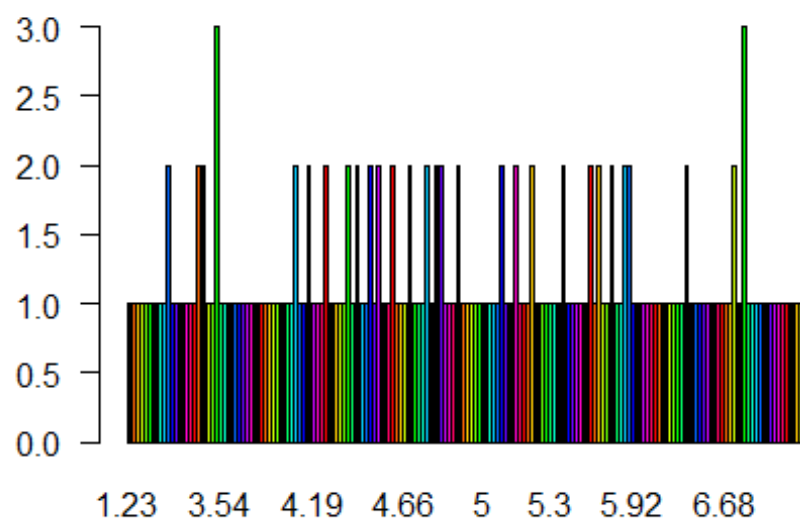
skin cancer



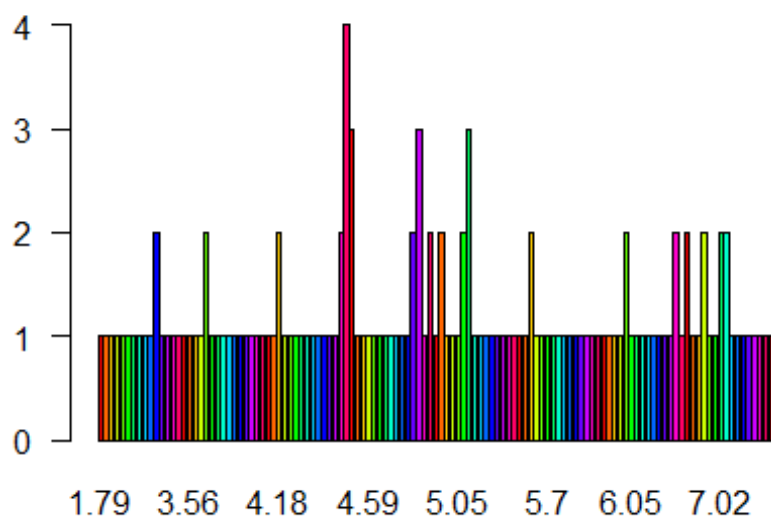
Alzheimer's disease



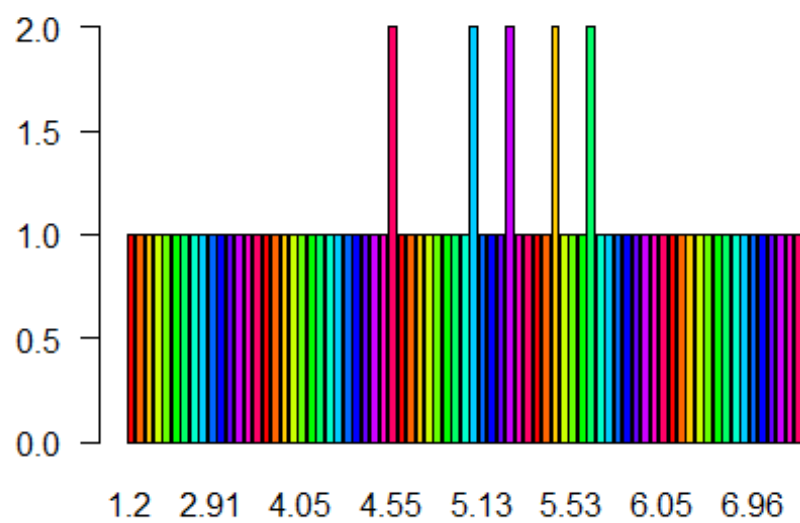
kidney disease



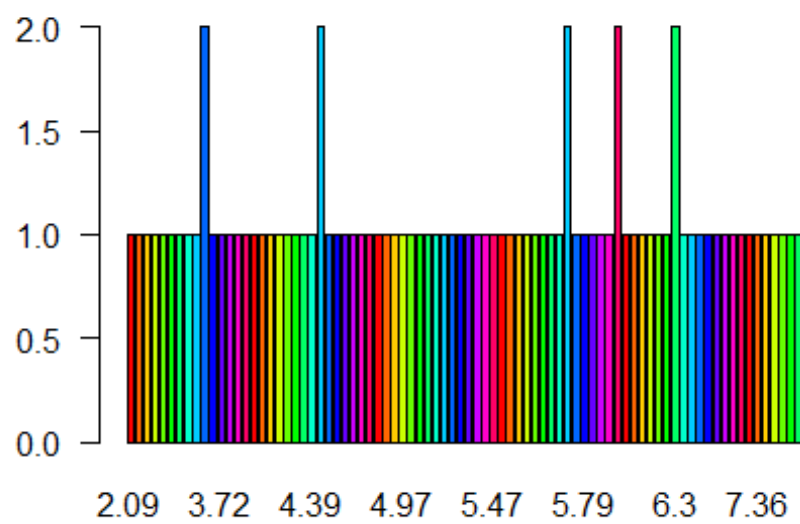
breast cancer



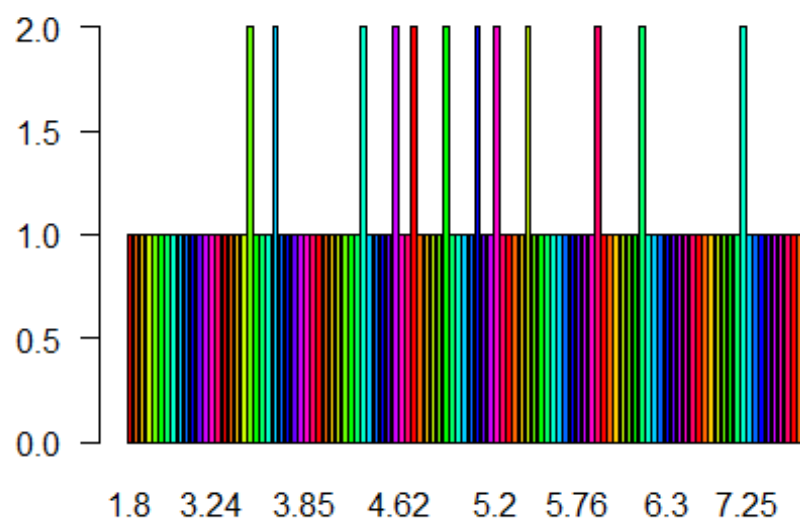
HIV/AIDS



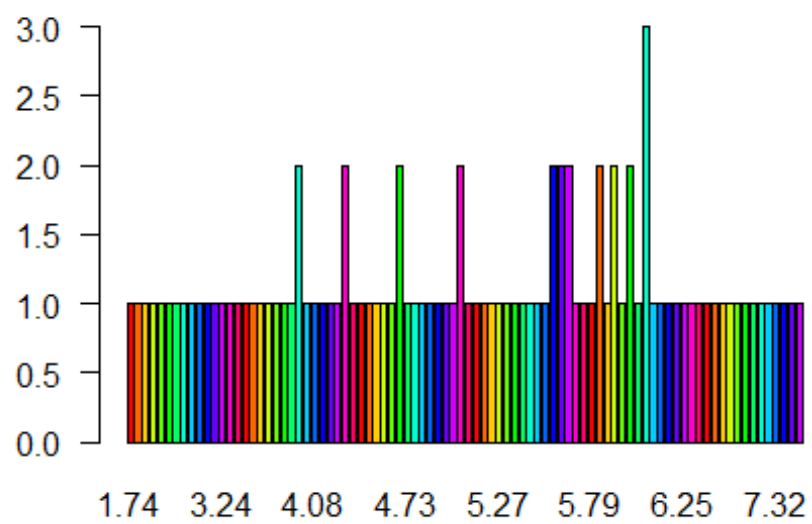
heart disease

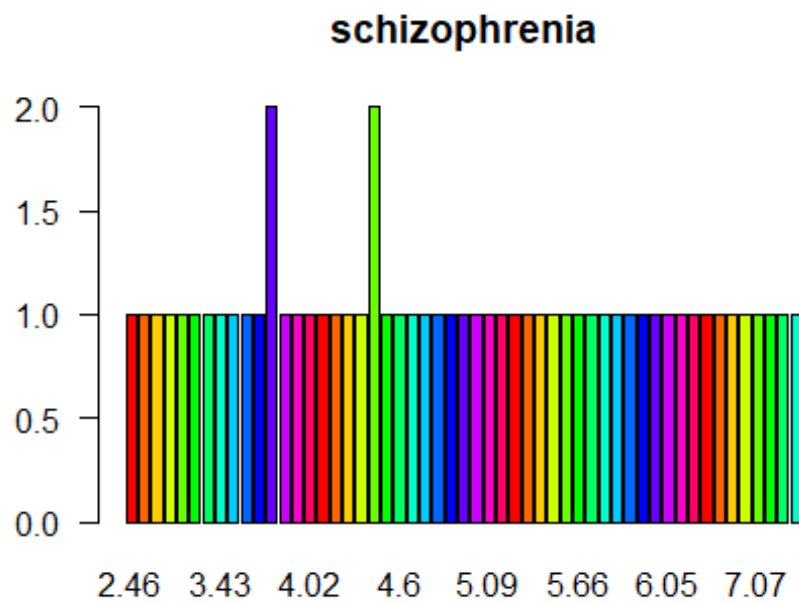


diabetes



gastritis

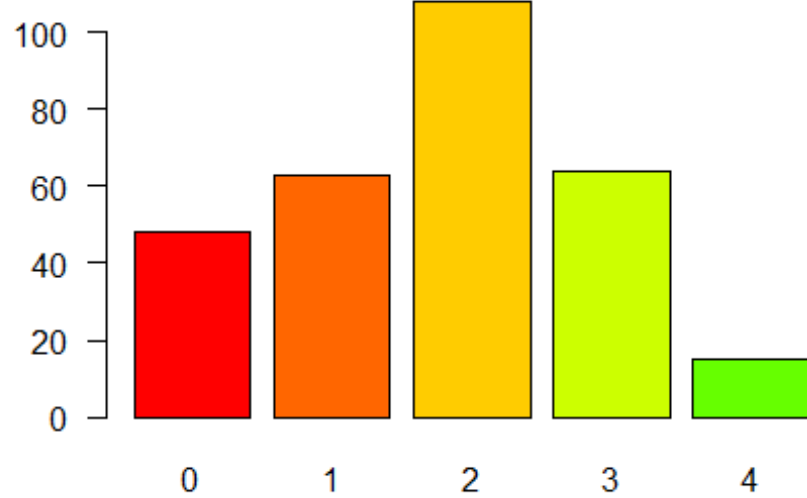




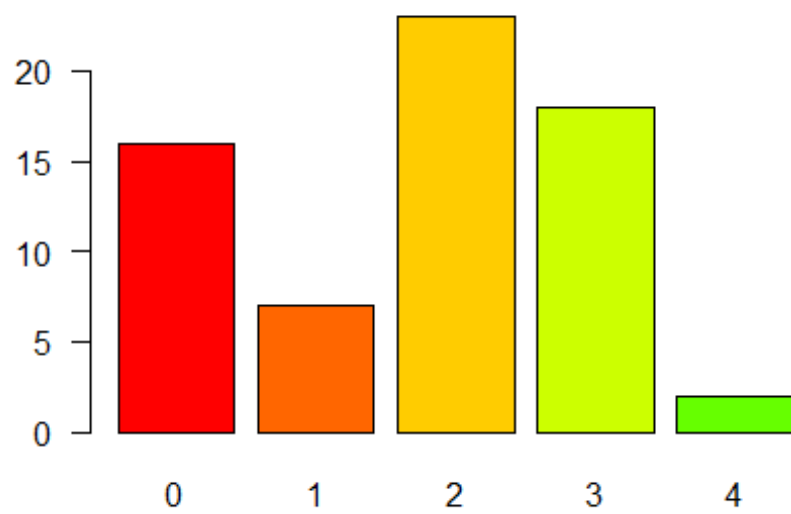
Available vehicles and disease

```
for (d in disease_name) {
  veh_disease_counts <- subset(patients, patients$disease == d)
  veh_disease_counts <- table(veh_disease_counts$available_vehicles)
  barplot(veh_disease_counts, main=d, col=rainbow(15), las=1)
}
```

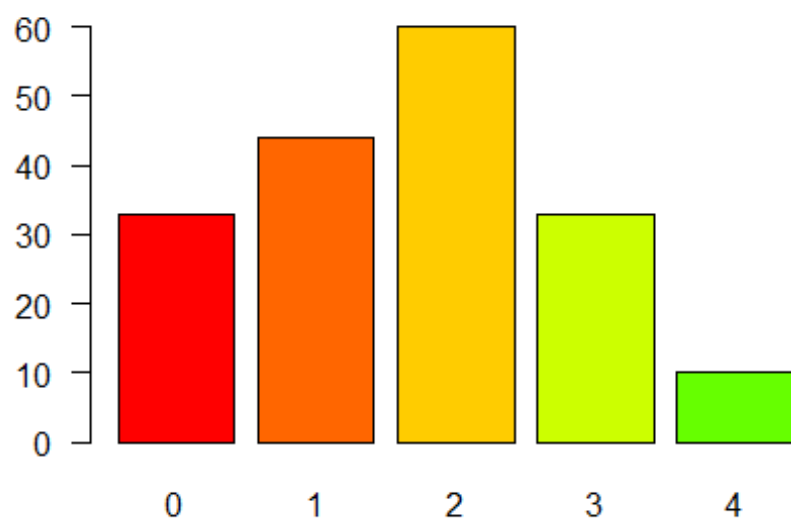
hypertension



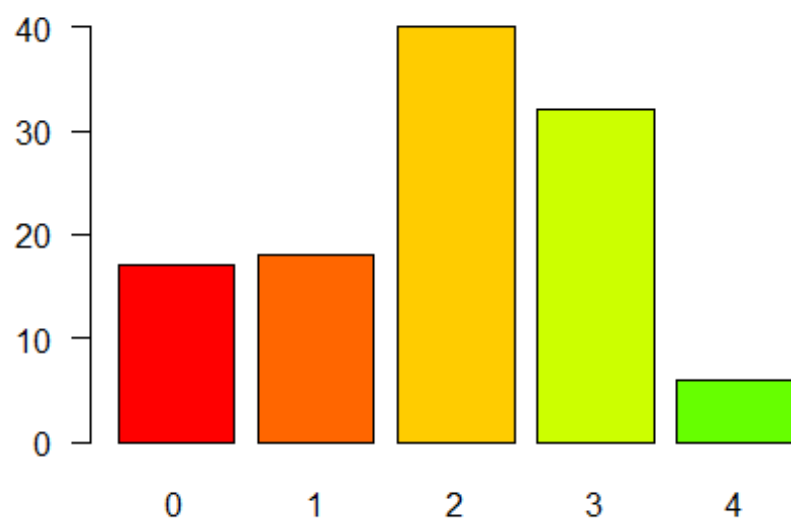
endometriosis



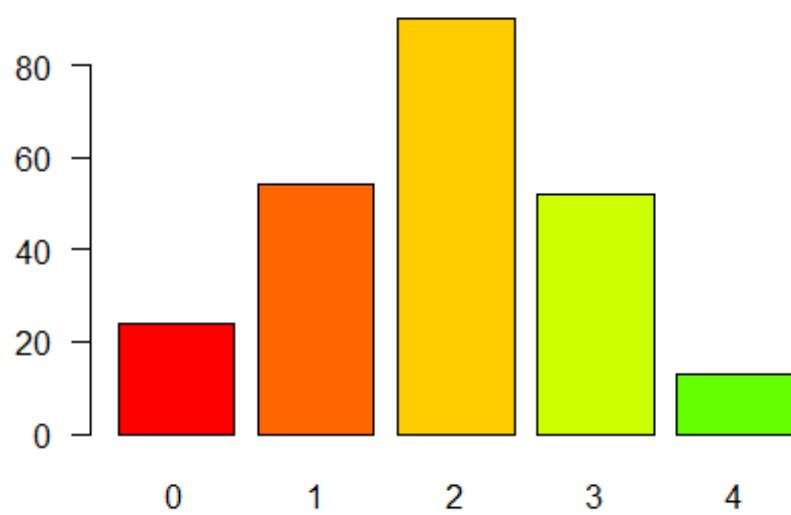
prostate cancer



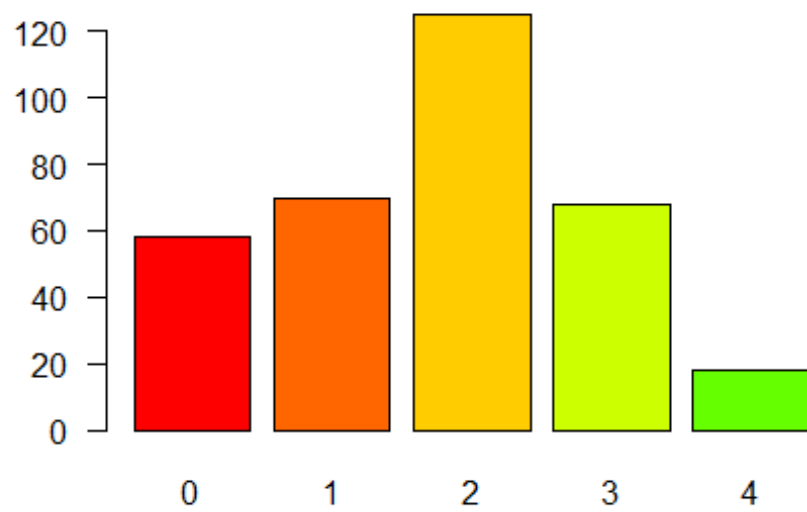
multiple sclerosis



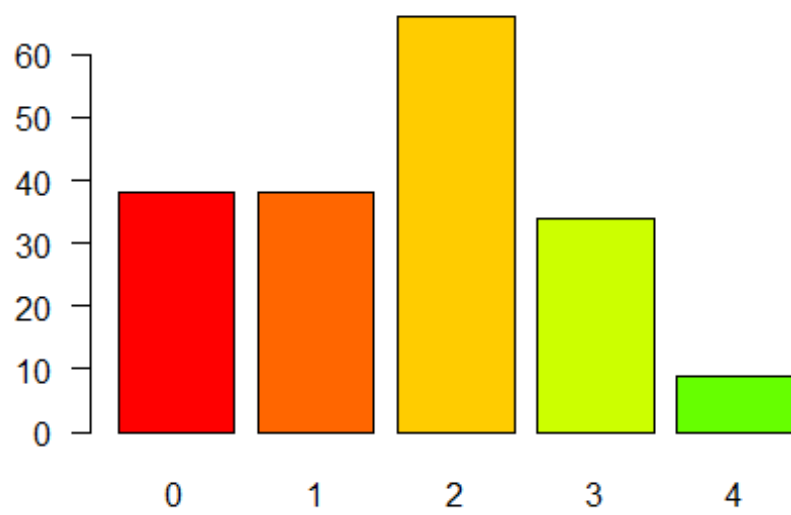
skin cancer



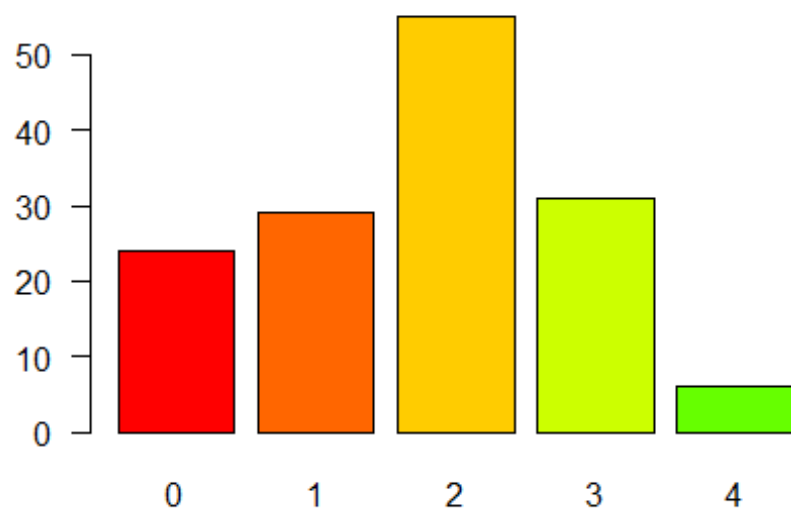
Alzheimer's disease



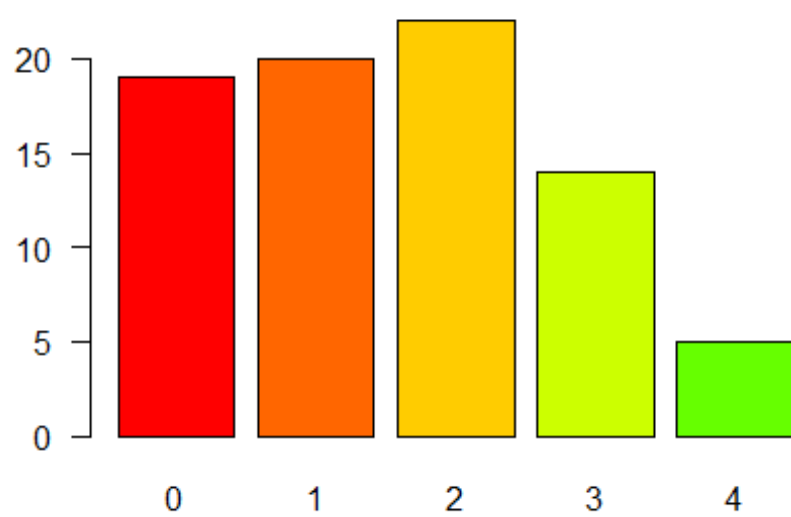
kidney disease



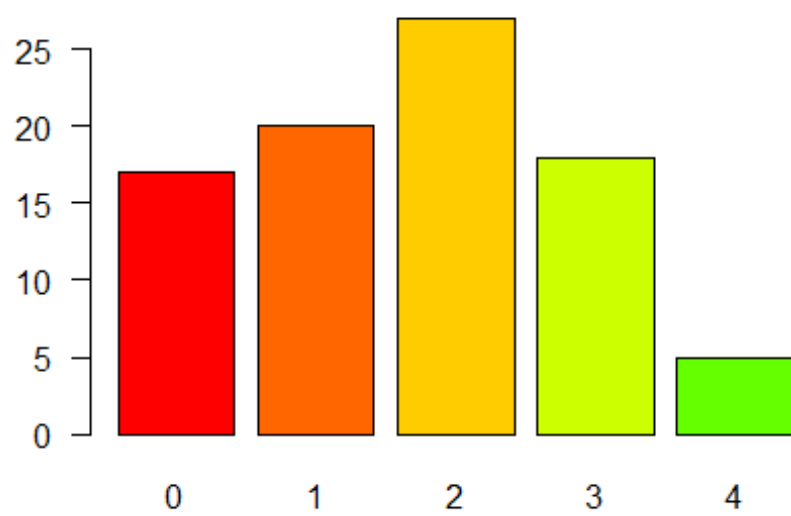
breast cancer



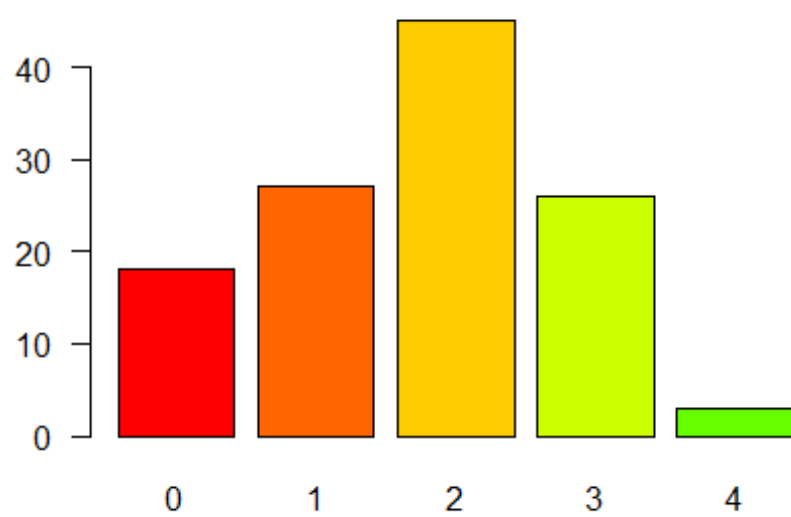
HIV/AIDS



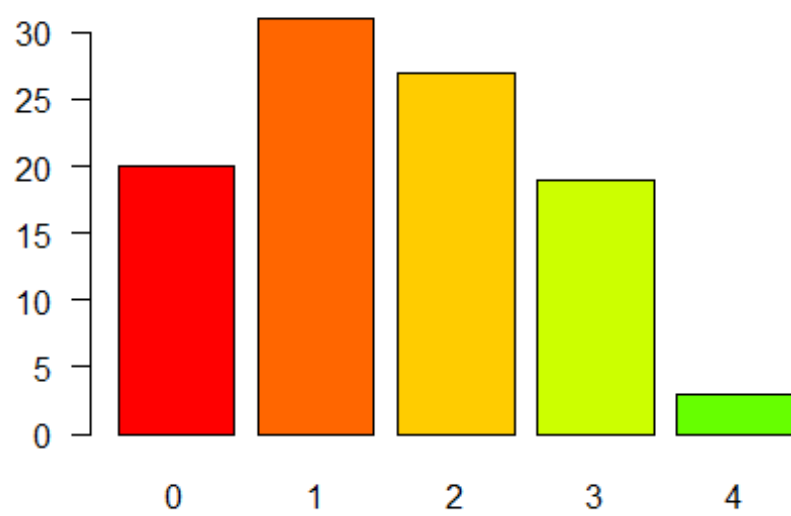
heart disease

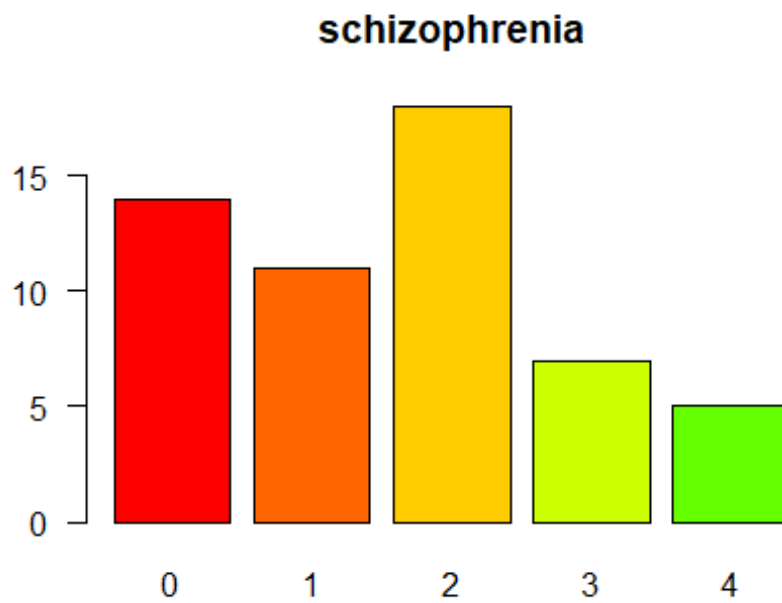


diabetes



gastritis

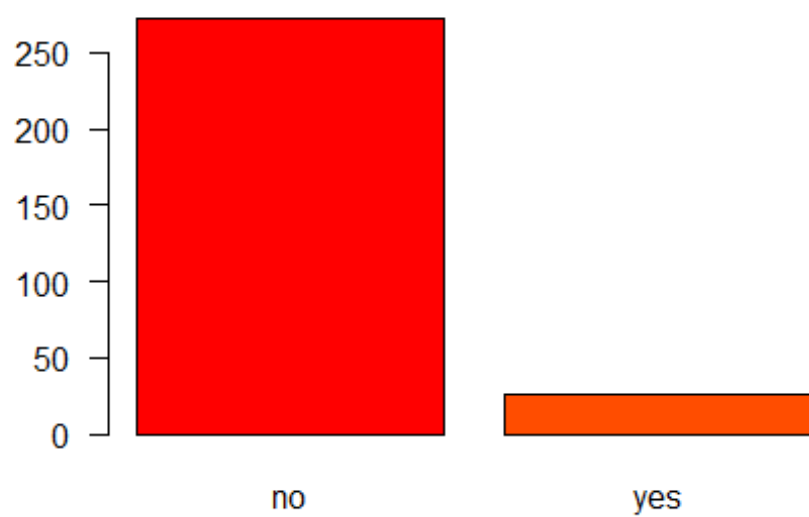




Military service and disease distribution

```
for (d in disease_name) {  
  mil_disease_counts <- subset(patients, patients$disease == d)  
  mil_disease_counts <- table(mil_disease_counts$military_service)  
  barplot(mil_disease_counts, main=d, col=rainbow(20), las=1)  
}
```

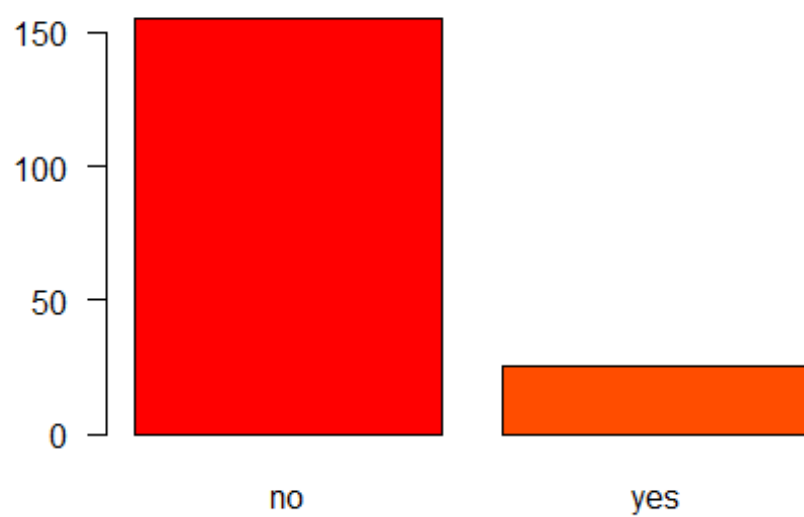
hypertension



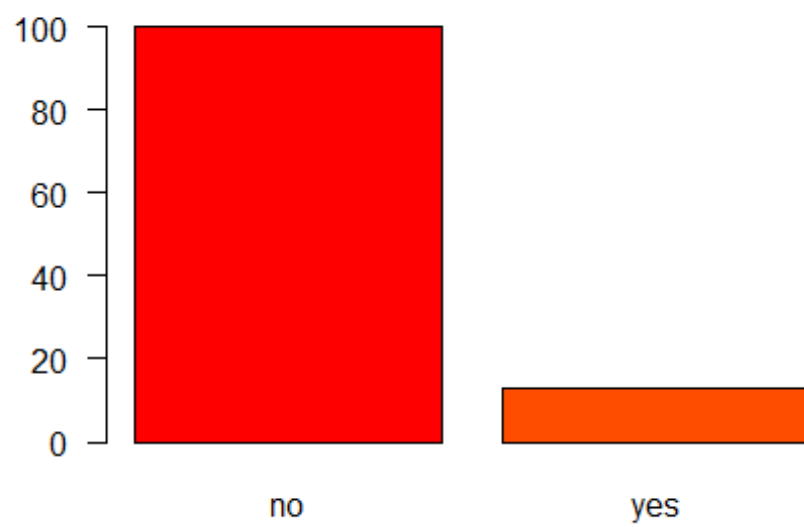
endometriosis



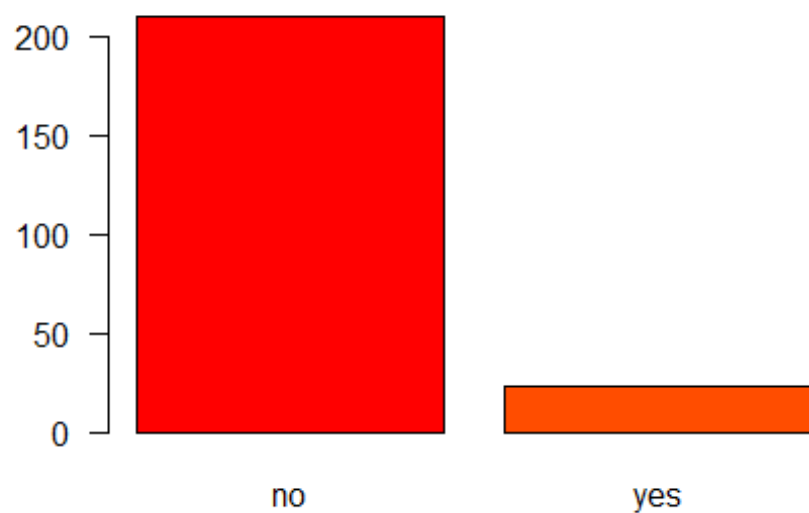
prostate cancer



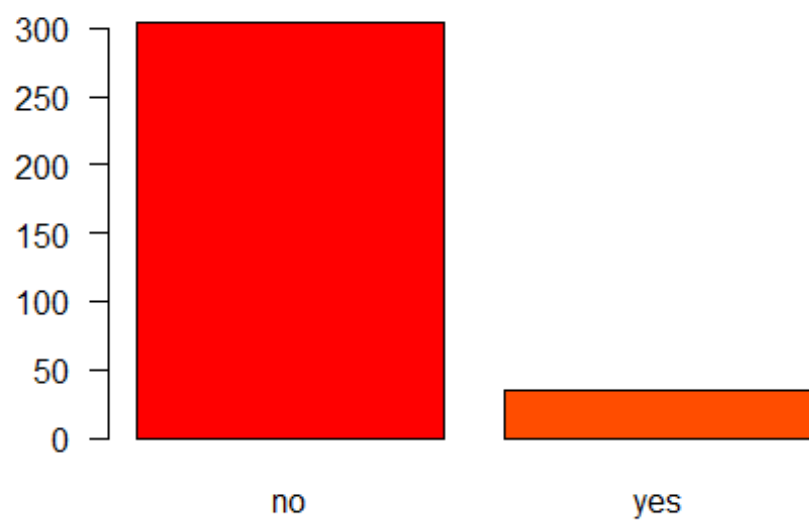
multiple sclerosis



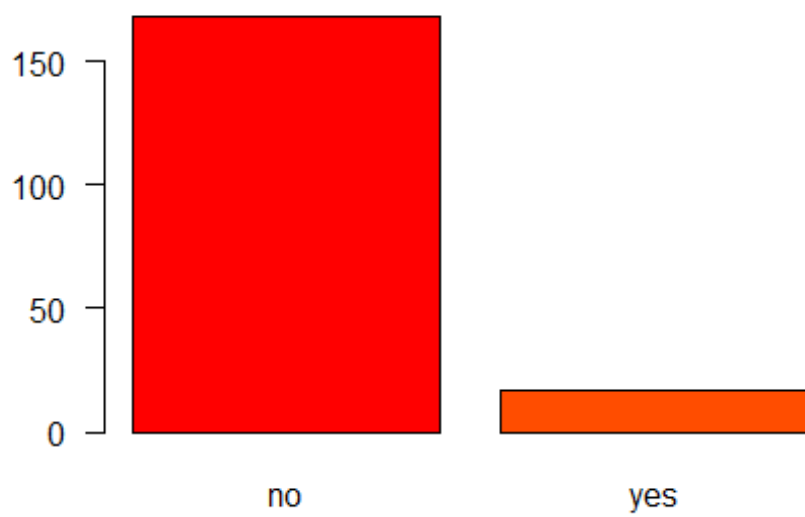
skin cancer



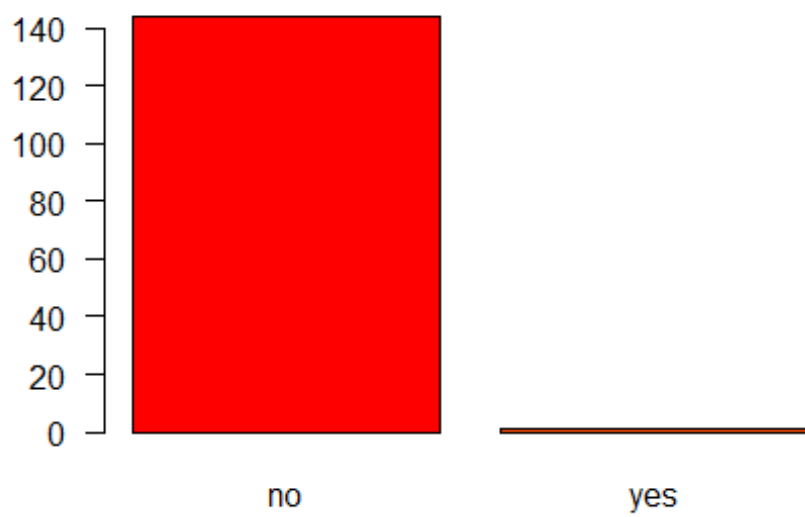
Alzheimer's disease



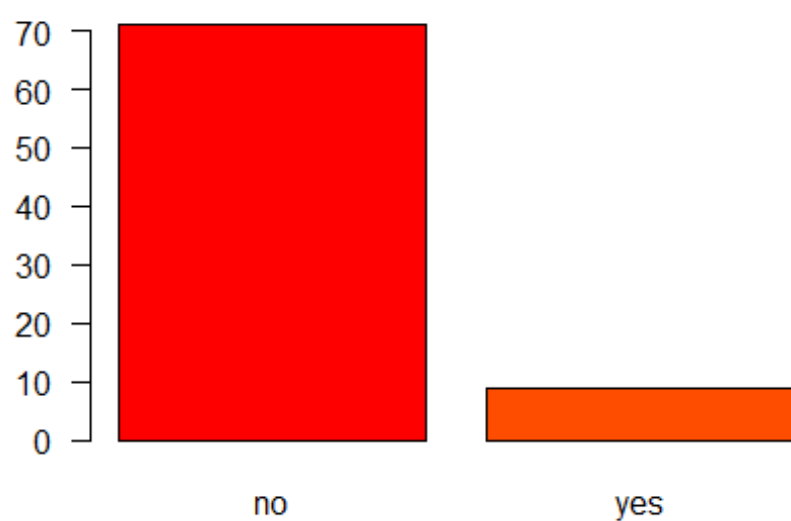
kidney disease



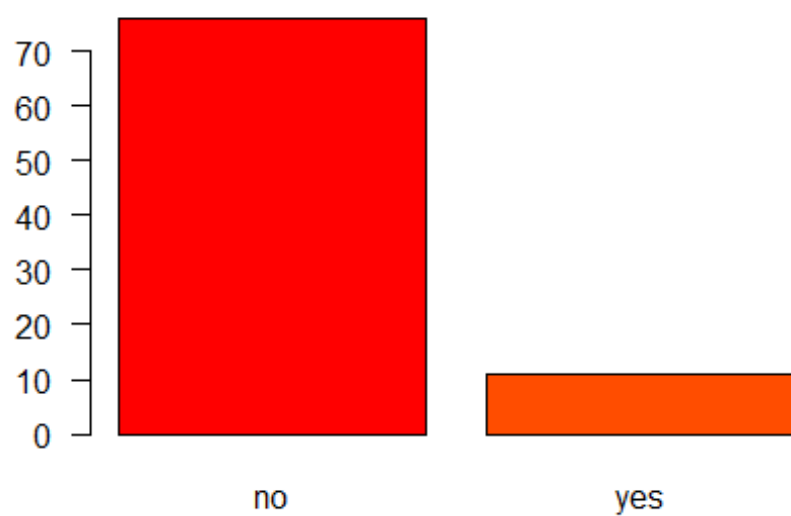
breast cancer



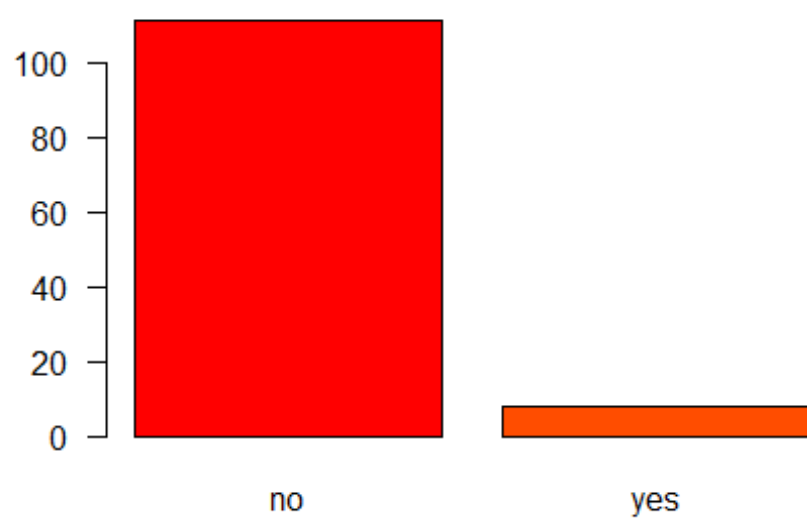
HIV/AIDS



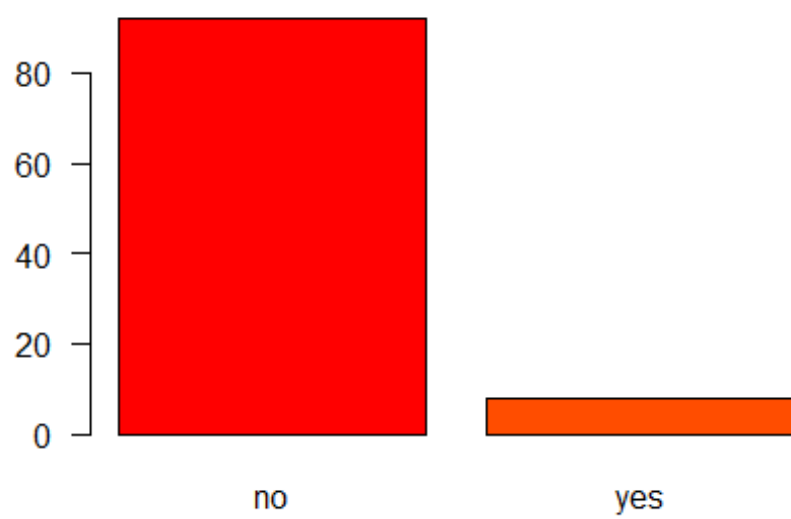
heart disease

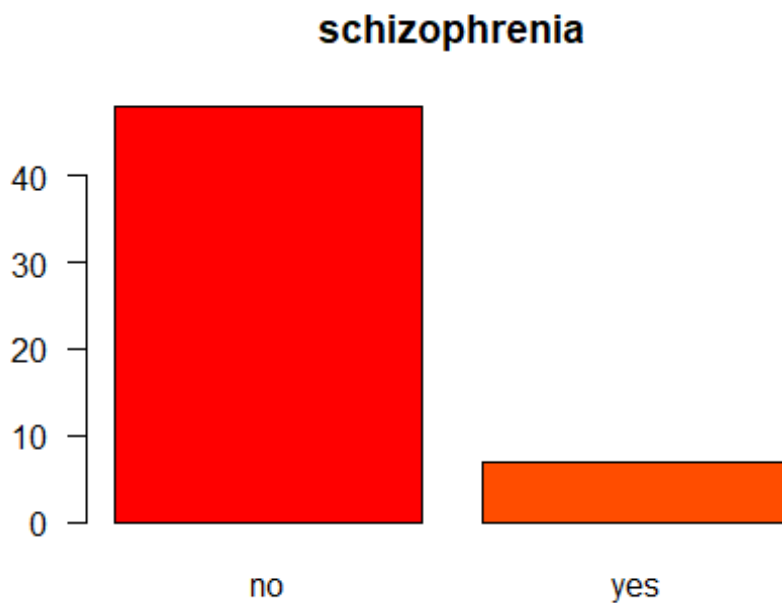


diabetes



gastritis





Feature Selection

Feature selection using Chi-squared method after splitting and balancing the dataset for three diseases (Alzheimer, hypertension, skin cancer)

Feature the selection Alzheimer using Chi-squared

```
alzheimer_set <- select(patients, gender, age, employment_status, education,
marital_status, ancestry, available_vehicles, avg_commute, zipcode,
children, daily_internet_use, military_service, alzheimer)
FeatureTrain <- sample(nrow(alzheimer_set), 0.7*nrow(alzheimer_set), replace
= FALSE)
FeatureTrainSet <- alzheimer_set[FeatureTrain,]
FeatureTestSet <- alzheimer_set[-FeatureTrain,]

response <- as.factor(patients$alzheimer)
input <- select(patients, gender, age, employment_status, education,
marital_status, ancestry, available_vehicles, avg_commute, zipcode,
children, daily_internet_use, military_service)

ubOver <- function(X, Y, k = 0, verbose=TRUE) {
}
data <- ubOver(X=input, Y=response)
alzheimer_os_dataset <- cbind(data$X, class=data$Y)
```



```

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$gender)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$gender
## X-squared = 0.030121, df = 1, p-value = 0.8622

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$age)

## Warning in chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$age):
## Chi-squared approximation may be incorrect

##
##  Pearson's Chi-squared test
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$age
## X-squared = 12.362, df = 3, p-value = 0.006241

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$education)

##
##  Pearson's Chi-squared test
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$education
## X-squared = 1.2066, df = 3, p-value = 0.7514

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$marital_status)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$marital_status
## X-squared = 8.6472, df = 1, p-value = 0.003276

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$zipcode)

##
##  Pearson's Chi-squared test
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$zipcode
## X-squared = 48.141, df = 12, p-value = 2.953e-06

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$employment_status)

##
##  Pearson's Chi-squared test
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$employment_status
## X-squared = 37.411, df = 3, p-value = 3.767e-08

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$children)

```

```
##
## Pearson's Chi-squared test
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$children
## X-squared = 17.862, df = 7, p-value = 0.01261

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$ancestry)

##
## Pearson's Chi-squared test
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$ancestry
## X-squared = 17.201, df = 3, p-value = 0.0006427

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$avg_commute)

## Warning in chisq.test(alzheimе_os_dataset$class,
## alzheimе_os_dataset$avg_commute): Chi-squared approximation may be
## incorrect

##
## Pearson's Chi-squared test
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$avg_commute
## X-squared = 2853.5, df = 1520, p-value < 2.2e-16

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$daily_internet_use)

## Warning in chisq.test(alzheimе_os_dataset$class,
## alzheimе_os_dataset$daily_internet_use): Chi-squared approximation may be
## incorrect

##
## Pearson's Chi-squared test
##
## data:  alzheimе_os_dataset$class and
alzheimе_os_dataset$daily_internet_use
## X-squared = 1612.5, df = 573, p-value < 2.2e-16

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$available_vehicles)

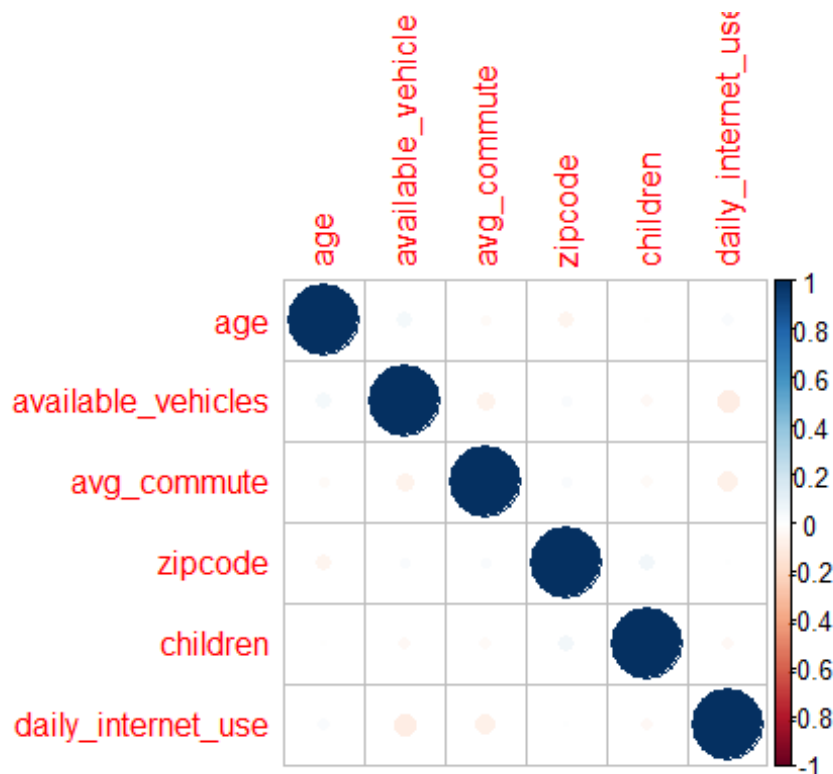
##
## Pearson's Chi-squared test
##
## data:  alzheimе_os_dataset$class and
alzheimе_os_dataset$available_vehicles
## X-squared = 8.9663, df = 4, p-value = 0.06195

chisq.test(alzheimе_os_dataset$class, alzheimе_os_dataset$military_service)

##
## Pearson's Chi-squared test with Yates' continuity correction
```

```
##
## data:  alzheimе_os_dataset$class and alzheimе_os_dataset$military_service
## X-squared = 2.1493, df = 1, p-value = 0.1426

alzheimе_os_dataset %>%
  filter(class == "1") %>%
  select_if(is.numeric) %>%
  cor() %>%
  corplot::corrplot()
```



Feature the selection Hypertension using Chi-squared

```
hypertension_set <- select(patients, gender, age, employment_status,
education, marital_status, ancestry, available_vehicles, avg_commute, zipcode,
children, daily_internet_use, military_service, hypertension)
FeatureTrain <- sample(nrow(hypertension_set), 0.7*nrow(hypertension_set),
replace = FALSE)
FeatureTrainSet <- hypertension_set[FeatureTrain,]
FeatureTestSet <- hypertension_set[-FeatureTrain,]

response <- as.factor(patients$hypertension)
input <- select(patients, gender, age, employment_status, education,
marital_status, ancestry, available_vehicles, avg_commute, zipcode,
children, daily_internet_use, military_service)

data <- ubOver(X=input, Y=response)
hypertension_os_dataset <- cbind(data$X, class=data$Y)
```

```

chisq.test(hypertension_os_dataset$class, hypertension_os_dataset$gender)

##
## Pearson's Chi-squared test with Yates' continuity correction
##
## data: hypertension_os_dataset$class and hypertension_os_dataset$gender
## X-squared = 6.2623, df = 1, p-value = 0.01233

chisq.test(hypertension_os_dataset$class, hypertension_os_dataset$age)

## Warning in chisq.test(hypertension_os_dataset$class,
## hypertension_os_dataset$age): Chi-squared approximation may be incorrect
##
## Pearson's Chi-squared test
##
## data: hypertension_os_dataset$class and hypertension_os_dataset$age
## X-squared = 35.943, df = 3, p-value = 7.698e-08

chisq.test(hypertension_os_dataset$class, hypertension_os_dataset$education)

##
## Pearson's Chi-squared test
##
## data: hypertension_os_dataset$class and hypertension_os_dataset$education
## X-squared = 1.463, df = 3, p-value = 0.6908

chisq.test(hypertension_os_dataset$class,
hypertension_os_dataset$marital_status)

##
## Pearson's Chi-squared test with Yates' continuity correction
##
## data: hypertension_os_dataset$class and
hypertension_os_dataset$marital_status
## X-squared = 1.2361, df = 1, p-value = 0.2662

chisq.test(hypertension_os_dataset$class, hypertension_os_dataset$zipcode)

##
## Pearson's Chi-squared test
##
## data: hypertension_os_dataset$class and hypertension_os_dataset$zipcode
## X-squared = 45.135, df = 12, p-value = 9.771e-06

chisq.test(hypertension_os_dataset$class,
hypertension_os_dataset$employment_status)

##
## Pearson's Chi-squared test
##

```

```

## data: hypertension_os_dataset$class and
hypertension_os_dataset$employment_status
## X-squared = 0.81971, df = 3, p-value = 0.8447

chisq.test(hypertension_os_dataset$class, hypertension_os_dataset$children)

##
## Pearson's Chi-squared test
##
## data: hypertension_os_dataset$class and hypertension_os_dataset$children
## X-squared = 36.927, df = 7, p-value = 4.842e-06

chisq.test(hypertension_os_dataset$class, hypertension_os_dataset$ancestry)

##
## Pearson's Chi-squared test
##
## data: hypertension_os_dataset$class and hypertension_os_dataset$ancestry
## X-squared = 2.9499, df = 3, p-value = 0.3994

chisq.test(hypertension_os_dataset$class,
hypertension_os_dataset$avg_commute)

## Warning in chisq.test(hypertension_os_dataset$class,
## hypertension_os_dataset$avg_commute): Chi-squared approximation may be
## incorrect

##
## Pearson's Chi-squared test
##
## data: hypertension_os_dataset$class and
hypertension_os_dataset$avg_commute
## X-squared = 2986.7, df = 1521, p-value < 2.2e-16

chisq.test(hypertension_os_dataset$class,
hypertension_os_dataset$daily_internet_use)

## Warning in chisq.test(hypertension_os_dataset$class,
## hypertension_os_dataset$daily_internet_use): Chi-squared approximation may
## be incorrect

##
## Pearson's Chi-squared test
##
## data: hypertension_os_dataset$class and
hypertension_os_dataset$daily_internet_use
## X-squared = 1605.3, df = 573, p-value < 2.2e-16

chisq.test(hypertension_os_dataset$class,
hypertension_os_dataset$available_vehicles)

```

```
##
## Pearson's Chi-squared test
##
## data: hypertension_os_dataset$class and
hypertension_os_dataset$available_vehicles
## X-squared = 2.3449, df = 4, p-value = 0.6726

chisq.test(hypertension_os_dataset$class,
hypertension_os_dataset$military_service)

##
## Pearson's Chi-squared test with Yates' continuity correction
##
## data: hypertension_os_dataset$class and
hypertension_os_dataset$military_service
## X-squared = 0.031941, df = 1, p-value = 0.8582
```

Feature the selection Skin Cancer using Chi-squared

```
skin_cancer_set <- select(patients, gender, age, employment_status,
education, marital_status, ancestry, available_vehicles, avg_commute, zipcode,
children, daily_internet_use, military_service, skin_cancer)
FeatureTrain <- sample(nrow(skin_cancer_set), 0.7*nrow(skin_cancer_set),
replace = FALSE)
FeatureTrainSet <- skin_cancer_set[FeatureTrain,]
FeatureTestSet <- skin_cancer_set[-FeatureTrain,]

response <- as.factor(patients$skin_cancer)
input <- select(patients, gender, age, employment_status, education,
marital_status, ancestry, available_vehicles, avg_commute, zipcode,
children, daily_internet_use, military_service)

data <- ubOver(X=input, Y=response)
skin_cancer_os_dataset <- cbind(data$X, class=data$Y)

chisq.test(skin_cancer_os_dataset$class, skin_cancer_os_dataset$gender)

##
## Pearson's Chi-squared test with Yates' continuity correction
##
## data: skin_cancer_os_dataset$class and skin_cancer_os_dataset$gender
## X-squared = 0.0045293, df = 1, p-value = 0.9463

chisq.test(skin_cancer_os_dataset$class, skin_cancer_os_dataset$age)

## Warning in chisq.test(skin_cancer_os_dataset$class,
## skin_cancer_os_dataset$age): Chi-squared approximation may be incorrect

##
## Pearson's Chi-squared test
##
```

```

## data: skin_cancer_os_dataset$class and skin_cancer_os_dataset$age
## X-squared = 21.309, df = 3, p-value = 9.082e-05

chisq.test(skin_cancer_os_dataset$class, skin_cancer_os_dataset$education)

##
## Pearson's Chi-squared test
##
## data: skin_cancer_os_dataset$class and skin_cancer_os_dataset$education
## X-squared = 1.0819, df = 3, p-value = 0.7814

chisq.test(skin_cancer_os_dataset$class,
skin_cancer_os_dataset$marital_status)

##
## Pearson's Chi-squared test with Yates' continuity correction
##
## data: skin_cancer_os_dataset$class and
skin_cancer_os_dataset$marital_status
## X-squared = 1.6657, df = 1, p-value = 0.1968

chisq.test(skin_cancer_os_dataset$class, skin_cancer_os_dataset$zipcode)

##
## Pearson's Chi-squared test
##
## data: skin_cancer_os_dataset$class and skin_cancer_os_dataset$zipcode
## X-squared = 25.445, df = 12, p-value = 0.01285

chisq.test(skin_cancer_os_dataset$class,
skin_cancer_os_dataset$employment_status)

##
## Pearson's Chi-squared test
##
## data: skin_cancer_os_dataset$class and
skin_cancer_os_dataset$employment_status
## X-squared = 41.343, df = 3, p-value = 5.53e-09

chisq.test(skin_cancer_os_dataset$class, skin_cancer_os_dataset$children)

##
## Pearson's Chi-squared test
##
## data: skin_cancer_os_dataset$class and skin_cancer_os_dataset$children
## X-squared = 45.33, df = 7, p-value = 1.18e-07

chisq.test(skin_cancer_os_dataset$class, skin_cancer_os_dataset$ancestry)

##
## Pearson's Chi-squared test
##

```

```

## data: skin_cancer_os_dataset$class and skin_cancer_os_dataset$ancestry
## X-squared = 3.4317, df = 3, p-value = 0.3297

chisq.test(skin_cancer_os_dataset$class, skin_cancer_os_dataset$avg_commute)

## Warning in chisq.test(skin_cancer_os_dataset$class,
## skin_cancer_os_dataset$avg_commute): Chi-squared approximation may be
## incorrect

##
## Pearson's Chi-squared test
##
## data: skin_cancer_os_dataset$class and skin_cancer_os_dataset$avg_commute
## X-squared = 3188, df = 1522, p-value < 2.2e-16

chisq.test(skin_cancer_os_dataset$class,
skin_cancer_os_dataset$daily_internet_use)

## Warning in chisq.test(skin_cancer_os_dataset$class,
## skin_cancer_os_dataset$daily_internet_use): Chi-squared approximation may
## be incorrect

##
## Pearson's Chi-squared test
##
## data: skin_cancer_os_dataset$class and
skin_cancer_os_dataset$daily_internet_use
## X-squared = 1911.4, df = 573, p-value < 2.2e-16

chisq.test(skin_cancer_os_dataset$class,
skin_cancer_os_dataset$available_vehicles)

##
## Pearson's Chi-squared test
##
## data: skin_cancer_os_dataset$class and
skin_cancer_os_dataset$available_vehicles
## X-squared = 31.832, df = 4, p-value = 2.071e-06

chisq.test(skin_cancer_os_dataset$class,
skin_cancer_os_dataset$military_service)

##
## Pearson's Chi-squared test with Yates' continuity correction
##
## data: skin_cancer_os_dataset$class and
skin_cancer_os_dataset$military_service
## X-squared = 0.5588, df = 1, p-value = 0.4547

```


Predictive modeling

Now we need to predict the diseases and try to analyse the root causes

We can divide the into 3 steps

1. Dealing with the Imbalance
2. Define algorithms
3. Testing algorithms

Dealing with the Imbalance

From the exploratory analysis above the dependent variable is imbalanced. There are many alternatives to tackle this problem:

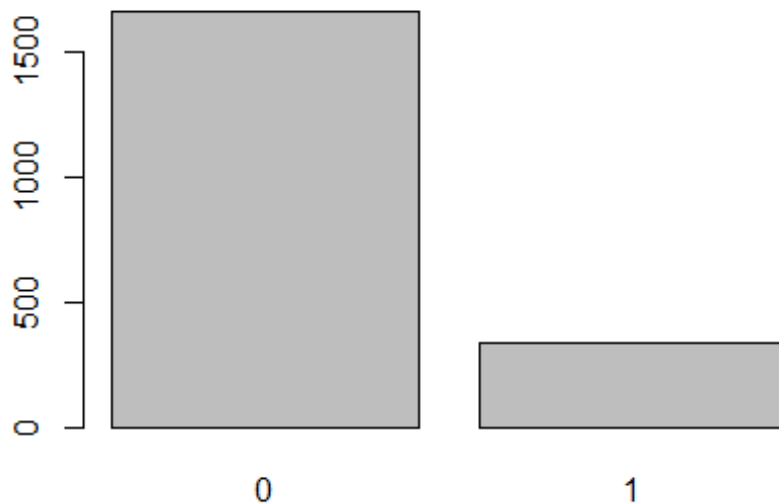
- * Over-sampling
- * Under-sampling
- * Synthetic Minority Over-Sampling Technique (SMOTE) Sampling
- * Cost Sensitive Learning

For this data set, will use over-sampling and SMOTE technique.

Patients with alzheimer

```
# Converting all columns to factors
patients[] <- lapply( patients, factor) # - using the "[]" keeps the data
frame structure
col_names <- names(patients)
patients[col_names] <- lapply(patients[col_names], factor)

# Bar plot analysis
barplot(table(patients$alzheimer), xlab=colnames(patients$alzheimer))
```



```
# Filter all the data and set Alzheimer as a target
alzheimer_set <- select(patients, gender, age, employment_status, education,
marital_status, ancestry, available_vehicles, zipcode,
children, military_service, alzheimer)
```

```
# Splitting the into a train and test set into 70/30
train <- sample(nrow(alzheimer_set), 0.7*nrow(alzheimer_set), replace =
FALSE)
TrainSet <- alzheimer_set[train,]
TestSet <- alzheimer_set[-train,]
```

```
response <- as.factor(patients$alzheimer)
input <- select(patients, gender, age, employment_status, education,
marital_status, ancestry)
```

Applying the Undersampling, oversampling, and smote to get a deep perspective of the data

Using Logistic Regression, Randomforest, and Naive Bayes Models in the data set

```
# Initialize variables
us_glm_accuracy <- c()
us_glm_precision <- c()
us_glm_recall <- c()
us_glm_f1 <- c()
```

```
os_glm_accuracy <- c()
os_glm_precision <- c()
os_glm_recall <- c()
os_glm_f1 <- c()
```

```
smote_glm_accuracy <- c()
smote_glm_precision <- c()
smote_glm_recall <- c()
smote_glm_f1 <- c()
```

```
us_rf_accuracy <- c()
us_rf_precision <- c()
us_rf_recall <- c()
us_rf_f1 <- c()
```

```
os_rf_accuracy <- c()
os_rf_precision <- c()
os_rf_recall <- c()
os_rf_f1 <- c()
```

```
smote_rf_accuracy <- c()
smote_rf_precision <- c()
smote_rf_recall <- c()
smote_rf_f1 <- c()
```

```
us_nb_accuracy <- c()
us_nb_precision <- c()
us_nb_recall <- c()
us_nb_f1 <- c()
```

```
os_nb_accuracy <- c()
os_nb_precision <- c()
os_nb_recall <- c()
os_nb_f1 <- c()
```

```
smote_nb_accuracy <- c()
smote_nb_precision <- c()
smote_nb_recall <- c()
smote_nb_f1 <- c()
```

```
# Using a 10-fold cross-validation and repeat the step 3 times
train_control <- trainControl(method = "cv", number = 10)
metric <- "Accuracy"
mtry <- sqrt(ncol(alzheimer_set))
tunegrid <- expand.grid(.mtry=mtry)
```

```
# Fixing the iterations through sampling the model 10 times to get the best mean model for the prediction for (i in 1:10) {
```

```

seed <- 999+i
set.seed(seed)

# Under sample
ubUnder <- function(X= input, Y=response, perc=40, method="percPos"){
}
  data <- ubUnder(X=input, Y=response, perc=40, method="percPos")
  us_dataset <- cbind(data$X, class=data$Y)

# Over sample
ubOver <- function(X= input, Y=response, perc=40, method="percPos"){
}
  data <- ubOver(X=input, Y=response)
  os_dataset <- cbind(data$X, class=data$Y)

# SMOTE
ubSMOTE <- function(X= input, Y=response, perc=40, method="percPos"){
}
  data <- ubSMOTE(X=input, Y=response)
  smote_dataset <- cbind(data$X, class=data$Y)

# Using logistic regression for the under sampling
ubUnder <- function(X= input, Y=response, perc=40, method="percPos"){
}
  data <- ubUnder(X= input, Y=response, perc=40, method="percPos")
  us_dataset <- cbind(data$X, class=data$Y)
  glm_mod <- caret::train(class~., data=us_dataset, trControl =
train_control, method="glm", family="binomial", tuneLength = 5)
  pred = predict(glm_mod, newdata=TestSet)
  us_cm <- confusionMatrix(data=pred, as.factor(TestSet$alzheimer),
mode='everything')
  us_glm_accuracy <- c(us_glm_accuracy, us_cm$overall['Accuracy'])
  us_glm_precision <- c(us_glm_precision, us_cm$byClass['Precision'])
  us_glm_recall <- c(us_glm_recall, us_cm$byClass['Recall'])
  us_glm_f1 <- c(us_glm_f1, us_cm$byClass['F1'])

# Using logistic regression for the over sampling
ubOver <- function(X= input, Y=response, perc=40, method="percPos"){
}

```

```

data <- ubOver(X= input, Y=response, perc=40, method="percPos")
us_dataset <- cbind(data$X, class=data$Y)

glm_mod <- caret::train(class~., data=os_dataset, trControl =
train_control, method="glm", family="binomial", tuneLength = 5)
pred = predict(glm_mod, newdata=TestSet)
os_cm <- confusionMatrix(data=pred, as.factor(TestSet$alzheimer),
mode='everything')
os_glm_accuracy <- c(os_glm_accuracy, os_cm$overall['Accuracy'])
os_glm_precision <- c(os_glm_precision, os_cm$byClass['Precision'])
os_glm_recall <- c(os_glm_recall, os_cm$byClass['Recall'])
os_glm_f1 <- c(os_glm_f1, os_cm$byClass['F1'])

# Using logistic regression for SMOTE

ubSMOTE <- function(X= input, Y=response, perc=40, method="percPos"){
}

data <- ubSMOTE(X= input, Y=response, perc=40, method="percPos")
us_dataset <- cbind(data$X, class=data$Y)

glm_mod <- caret::train(class~., data=smote_dataset, trControl =
train_control, method="glm", family="binomial", tuneLength = 5)
pred = predict(glm_mod, newdata=TestSet)
cm_smote <- confusionMatrix(data=pred, as.factor(TestSet$alzheimer),
mode='everything')
smote_glm_accuracy <- c(smote_glm_accuracy, cm_smote$overall['Accuracy'])
smote_glm_precision <- c(smote_glm_precision,
cm_smote$byClass['Precision'])
smote_glm_recall <- c(smote_glm_recall, cm_smote$byClass['Recall'])
smote_glm_f1 <- c(smote_glm_f1, cm_smote$byClass['F1'])

# Random forest for the under sampling
rf_mod <- caret::train(class~., data=us_dataset, method="rf",
metric=metric, tuneGrid=tuneGrid, trControl=train_control)
pred = predict(rf_mod, newdata=TestSet)
us_cm <- confusionMatrix(data=pred, as.factor(TestSet$alzheimer),
mode='everything')
us_rf_accuracy <- c(us_rf_accuracy, us_cm$overall['Accuracy'])
us_rf_precision <- c(us_rf_precision, us_cm$byClass['Precision'])
us_rf_recall <- c(us_rf_recall, us_cm$byClass['Recall'])
us_rf_f1 <- c(us_rf_f1, us_cm$byClass['F1'])

# Random forest for the over sampling
rf_mod <- caret::train(class~., data=os_dataset, method="rf",
metric=metric, tuneGrid=tuneGrid, trControl=train_control)
pred = predict(rf_mod, newdata=TestSet)

```

```

os_cm <- confusionMatrix(data=pred, as.factor(TestSet$alzheimer),
mode='everything')
os_rf_accuracy <- c(os_rf_accuracy, os_cm$overall['Accuracy'])
os_rf_precision <- c(os_rf_precision, os_cm$byClass['Precision'])
os_rf_recall <- c(os_rf_recall, os_cm$byClass['Recall'])
os_rf_f1 <- c(os_rf_f1, os_cm$byClass['F1'])

# Random forest for the smote

rf_mod <- caret::train(class~., data=smote_dataset, method="rf",
metric=metric, tuneGrid=tuneGrid, trControl=train_control)
pred = predict(rf_mod, newdata=TestSet)
cm_smote <- confusionMatrix(data=pred, as.factor(TestSet$alzheimer),
mode='everything')
smote_rf_accuracy <- c(smote_rf_accuracy, cm_smote$overall['Accuracy'])
smote_rf_precision <- c(smote_rf_precision,
cm_smote$byClass['Precision'])
smote_rf_recall <- c(smote_rf_recall, cm_smote$byClass['Recall'])
smote_rf_f1 <- c(smote_rf_f1, cm_smote$byClass['F1'])

# Naive bayes for the under sampling
nb_mod <- caret::train(class~., data=us_dataset, method="nb",
trControl=train_control)
pred = predict(nb_mod, newdata=TestSet)
us_cm <- confusionMatrix(data=pred, as.factor(TestSet$alzheimer),
mode='everything')
us_nb_accuracy <- c(us_nb_accuracy, us_cm$overall['Accuracy'])
us_nb_precision <- c(us_nb_precision, us_cm$byClass['Precision'])
us_nb_recall <- c(us_nb_recall, us_cm$byClass['Recall'])
us_nb_f1 <- c(us_nb_f1, us_cm$byClass['F1'])

# Naive bayes for the over sampling
nb_mod <- caret::train(class~., data=os_dataset, method="nb",
trControl=train_control)
pred = predict(nb_mod, newdata=TestSet)
os_cm <- confusionMatrix(data=pred, as.factor(TestSet$alzheimer),
mode='everything')
os_nb_accuracy <- c(os_nb_accuracy, os_cm$overall['Accuracy'])
os_nb_precision <- c(os_nb_precision, os_cm$byClass['Precision'])
os_nb_recall <- c(os_nb_recall, os_cm$byClass['Recall'])
os_nb_f1 <- c(os_nb_f1, os_cm$byClass['F1'])

# Naive bayes for the smote

nb_mod <- caret::train(class~., data=smote_dataset, method="nb",
trControl=train_control)
pred = predict(nb_mod, newdata=TestSet)
cm_smote <- confusionMatrix(data=pred, as.factor(TestSet$alzheimer),
mode='everything')
smote_nb_accuracy <- c(smote_nb_accuracy, cm_smote$overall['Accuracy'])

```

```

    smote_nb_precision <- c(smote_nb_precision,
cm_smote$byClass['Precision'])
    smote_nb_recall <- c(smote_nb_recall, cm_smote$byClass['Recall'])
    smote_nb_f1 <- c(smote_nb_f1, cm_smote$byClass['F1'])
  }

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning: model fit failed for Fold03: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 245

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 265

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 274

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 245

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 317

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 236

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 234

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 297

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 280

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 313

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 243

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 292

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 228

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 285

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 245

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 317

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning: model fit failed for Fold03: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
##   Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67
```

[illegible]

```
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning: model fit failed for Fold10: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 300

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 301

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 223
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 224

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 283

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 271

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 294

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 254

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 280

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 299

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 217

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 218

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 267

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 316

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 377

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 381

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 396

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 407

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 446

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 478
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 507

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 533

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 568

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 581

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 586

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning: model fit failed for Fold03: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
##   Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 234

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 234

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading
```

```
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 32  
  
## Warning: model fit failed for Fold05: usekernel=FALSE, fL=0, adjust=1  
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :  
## Zero variances for at least one class in variables:  
employment_statusstudent  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 34  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 46  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 70  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 25  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 62
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 224

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 308

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 269

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 294

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 238
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 261

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 235

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 266

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 271

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 308

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 300

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 254

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 279

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 234

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 377

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 381
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 396

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 407

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 446

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 478

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 507

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 533

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 568

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 581

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 586

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 229

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning: model fit failed for Fold03: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 183

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 218
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 229

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning: model fit failed for Fold07: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
##   Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 300
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 277

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 287

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 283

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 238

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 236

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 251

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 306
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 274

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 296

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 234

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 317

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 309

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 228

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 236

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 250

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 294

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 377

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 381

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 396

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 407

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 446

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 478
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 507

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 533

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 568

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 581

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 586

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 238

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 228

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 180

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 218

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning: model fit failed for Fold09: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 241

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 267

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 296

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 312

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 218

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 286

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 223

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 229

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 236

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 252

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 296

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 251

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 252

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 310

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 316

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 270

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 281

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 303

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 377

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 381

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 396

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 407

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 446

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 478

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 507

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 533

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 568

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 581

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 586

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 224
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning: model fit failed for Fold05: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 254

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 278

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 313

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 224

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 269

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 217

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 296

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 314

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 252

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 265
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 244

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 217

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 260

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 228

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 238

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 86

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 279

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 296

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 300

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 279

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 377

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 381

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 396

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 407

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 446

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 478

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 507

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 533

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 568

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 581
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 586

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 236

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 236

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 183

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 223

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 377

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 381

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 396

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 407

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 507
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 533

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 568

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 581

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning: model fit failed for Fold10: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 311

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 239

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 252

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 301

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 265

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 278

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 241

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 244

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 305

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 316

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 244

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 94

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 218
```



```
## Warning: model fit failed for Fold06: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning: model fit failed for Fold03: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 261

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 279

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 284

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 285

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 213

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 312

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 245

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 297

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 234

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 180

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 243

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 229

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 303

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 377

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 381

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 396

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 407

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 446

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 478

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 507

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 533

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 568

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 581

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 586

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 186

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 86

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 377

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 381

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 396

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 407

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 446

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 507

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 533
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 568

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 581

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64
```

```
## Warning: model fit failed for Fold07: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 251

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 267

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 281

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 183

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 236
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 275

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 244

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 254

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 316

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 265

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 241

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 311

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 217

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 241

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 265

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 295

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 251

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 285

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 377

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 381

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 396

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 407

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 446

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 478

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 507

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 533

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 568

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 581

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 586

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 94

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 232

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 235

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning: model fit failed for Fold07: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 229

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 223
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 238

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 213

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 254

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 317

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 218

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 298

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 254

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 267

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 272

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 303

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 229

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 185

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning: model fit failed for Fold08: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 183

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.
```

Alzheimer analysis

Data is partitioned into a test and training set using a 70/30 split

```
df <- 1(us_glm_accuracy, os_glm_accuracy, smote_glm_accuracy, us_rf_accuracy,
os_rf_accuracy, smote_rf_accuracy, us_nb_accuracy, os_nb_accuracy,
smote_nb_accuracy)
```

us_glm_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.7900000 0.8116667 0.7900000 0.7850000 0.7883333 0.7966667 0.7966667
## Accuracy Accuracy Accuracy
## 0.7866667 0.7816667 0.7800000
```

os_glm_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.5550000 0.5500000 0.5483333 0.5266667 0.5200000 0.5450000 0.5350000
## Accuracy Accuracy Accuracy
## 0.5366667 0.5450000 0.5316667
```

smote_glm_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.6983333 0.7033333 0.7283333 0.7100000 0.7250000 0.7016667 0.7133333
## Accuracy Accuracy Accuracy
## 0.7000000 0.7250000 0.7016667
```

us_rf_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.8116667 0.8183333 0.8150000 0.7966667 0.8300000 0.8266667 0.8033333
## Accuracy Accuracy Accuracy
## 0.8016667 0.8150000 0.8116667
```

os_rf_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.5966667 0.5783333 0.5566667 0.5916667 0.5850000 0.5800000 0.6083333
## Accuracy Accuracy Accuracy
## 0.5800000 0.5700000 0.5966667
```

smote_rf_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.7650000 0.7683333 0.7833333 0.7483333 0.7766667 0.7433333 0.7750000
## Accuracy Accuracy Accuracy
## 0.7500000 0.7683333 0.7666667
```

us_nb_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.6866667 0.8366667 0.8283333 0.8300000 0.7966667 0.8366667 0.6716667
## Accuracy Accuracy Accuracy
## 0.8350000 0.8366667 0.7966667
```

os_nb_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.1866667 0.2233333 0.2266667 0.2350000 0.2783333 0.2150000 0.1983333
## Accuracy Accuracy Accuracy
## 0.2383333 0.3133333 0.1983333
```

smote_nb_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.7500000 0.7600000 0.7783333 0.7950000 0.7850000 0.6033333 0.7483333
## Accuracy Accuracy Accuracy
## 0.6566667 0.8066667 0.7433333
```

us_glm_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8443223 0.8406305 0.8405797 0.8409506 0.8415301 0.8429603 0.8442029
## Precision Precision Precision
## 0.8488806 0.8391225 0.8464419
```

os_glm_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8827362 0.8625000 0.8713826 0.8784722 0.8689655 0.8566978 0.8655738
## Precision Precision Precision
## 0.8758389 0.8459215 0.8646865
```

smote_glm_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8350731 0.8333333 0.8410463 0.8374486 0.8363273 0.8414376 0.8353659
## Precision Precision Precision
## 0.8340249 0.8404040 0.8357588
```

us_rf_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8394415 0.8441331 0.8447972 0.8467153 0.8436426 0.8442907 0.8529412
## Precision Precision Precision
## 0.8450450 0.8484848 0.8454707
```

os_rf_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8939394 0.8952381 0.8907285 0.9028213 0.8940810 0.9058442 0.8985075
## Precision Precision Precision
## 0.8930818 0.8935484 0.9062500
```

smote_rf_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8412098 0.8405253 0.8444444 0.8368522 0.8445693 0.8411765 0.8391867
## Precision Precision Precision
## 0.8397683 0.8392523 0.8376866
```

us_nb_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8536036 0.8366667 0.8375635 0.8378378 0.8333333 0.8366667 0.8588235
## Precision Precision Precision
## 0.8375209 0.8366667 0.8442029
```

os_nb_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 1.0000000 0.9285714 0.9318182 0.8909091 0.9259259 0.9696970 1.0000000
## Precision Precision Precision
## 0.8947368 0.8813559 1.0000000
```

smote_nb_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8333333 0.8314815 0.8348457 0.8365897 0.8348294 0.8419689 0.8342857
## Precision Precision Precision
## 0.8303571 0.8327586 0.8307985
```

us_glm_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.9183267 0.9561753 0.9243028 0.9163347 0.9203187 0.9302789 0.9282869
## Recall Recall Recall
## 0.9063745 0.9143426 0.9003984
```

os_glm_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.5398406 0.5498008 0.5398406 0.5039841 0.5019920 0.5478088 0.5258964
## Recall Recall Recall
## 0.5199203 0.5577689 0.5219124
```

smote_glm_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.7968127 0.8067729 0.8326693 0.8107570 0.8346614 0.7928287 0.8187251
## Recall Recall Recall
## 0.8007968 0.8286853 0.8007968
```

us_rf_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.9581673 0.9601594 0.9541833 0.9243028 0.9780876 0.9721116 0.9243028
```

```
##      Recall      Recall      Recall
## 0.9342629 0.9482072 0.9482072
```

os_rf_recall

```
##      Recall      Recall      Recall      Recall      Recall      Recall      Recall
## 0.5876494 0.5617530 0.5358566 0.5737052 0.5717131 0.5557769 0.5996016
##      Recall      Recall      Recall
## 0.5657371 0.5517928 0.5776892
```

smote_rf_recall

```
##      Recall      Recall      Recall      Recall      Recall      Recall      Recall
## 0.8864542 0.8924303 0.9083665 0.8685259 0.8984064 0.8545817 0.9043825
##      Recall      Recall      Recall
## 0.8665339 0.8944223 0.8944223
```

us_nb_recall

```
##      Recall      Recall      Recall      Recall      Recall      Recall      Recall
## 0.7549801 1.0000000 0.9860558 0.9880478 0.9462151 1.0000000 0.7270916
##      Recall      Recall      Recall
## 0.9960159 1.0000000 0.9282869
```

os_nb_recall

```
##      Recall      Recall      Recall      Recall      Recall      Recall      Recall
## 0.02788845 0.07768924 0.08167331 0.09760956 0.14940239 0.06374502
##      Recall      Recall      Recall      Recall
## 0.04183267 0.10159363 0.20717131 0.04183267
```

smote_nb_recall

```
##      Recall      Recall      Recall      Recall      Recall      Recall      Recall
## 0.8764940 0.8944223 0.9163347 0.9382470 0.9262948 0.6474104 0.8725100
##      Recall      Recall      Recall
## 0.7410359 0.9621514 0.8705179
```

us_glm_f1

```
##      F1      F1      F1      F1      F1      F1      F1
## 0.8797710 0.8946878 0.8804554 0.8770257 0.8791627 0.8844697 0.8842505
##      F1      F1      F1
## 0.8766859 0.8751192 0.8725869
```

os_glm_f1

```
##      F1      F1      F1      F1      F1      F1      F1
## 0.6699629 0.6715328 0.6666667 0.6405063 0.6363636 0.6682868 0.6542751
##      F1      F1      F1
## 0.6525000 0.6722689 0.6509317
```

smote_glm_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.8154944 0.8198381 0.8368368 0.8238866 0.8354935 0.8164103 0.8269618
##          F1          F1          F1
## 0.8170732 0.8345035 0.8179044
```

us_rf_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.8948837 0.8984157 0.8961646 0.8838095 0.9059041 0.9037037 0.8871893
##          F1          F1          F1
## 0.8874172 0.8955786 0.8938967
```

os_rf_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.7091346 0.6903305 0.6691542 0.7015834 0.6974484 0.6888889 0.7192354
##          F1          F1          F1
## 0.6926829 0.6822660 0.7055961
```

smote_rf_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.8632396 0.8657005 0.8752399 0.8523949 0.8706564 0.8478261 0.8705657
##          F1          F1          F1
## 0.8529412 0.8659595 0.8651252
```

us_nb_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.8012685 0.9110708 0.9057640 0.9067642 0.8861940 0.9110708 0.7874865
##          F1          F1          F1
## 0.9099181 0.9110708 0.8842505
```

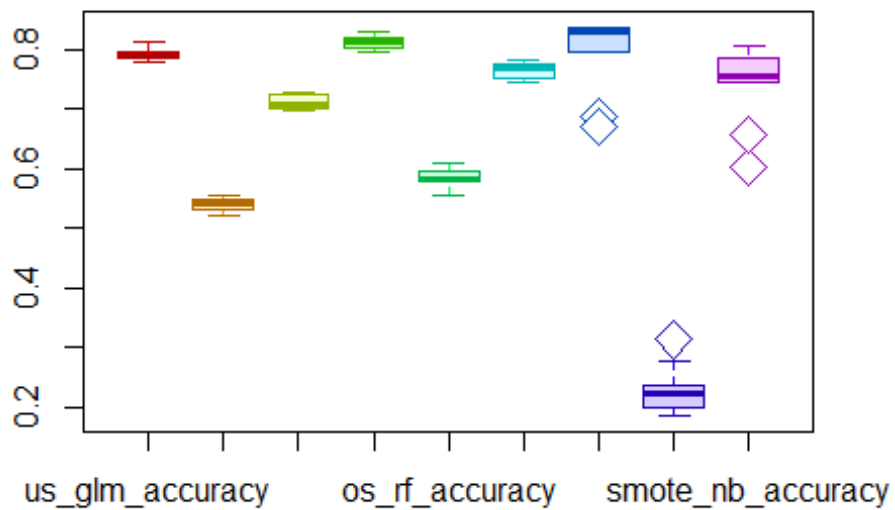
os_nb_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.05426357 0.14338235 0.15018315 0.17594255 0.25728988 0.11962617
##          F1          F1          F1          F1
## 0.08030593 0.18246869 0.33548387 0.08030593
```

smote_nb_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.8543689 0.8618042 0.8736942 0.8845070 0.8781870 0.7319820 0.8529698
##          F1          F1          F1
## 0.7831579 0.8927911 0.8501946
```

```
c1 <- rainbow(10)
c2 <- rainbow(10, alpha=0.2)
c3 <- rainbow(10, v=0.7)
boxplot(df, col=c2, medcol=c3, whiskcol=c1, staplecol=c3, boxcol=c3,
outcol=c3, pch=23, cex=2)
```



```

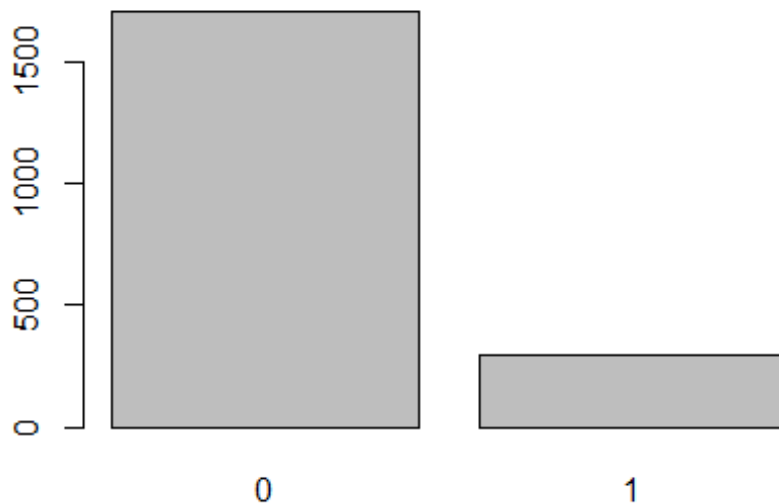
mean(us_nb_accuracy)
## [1] 0.7955
mean(us_nb_precision)
## [1] 0.8412886
mean(us_nb_recall)
## [1] 0.9326693
mean(us_nb_f1)
## [1] 0.8814858
mean(os_nb_accuracy)
## [1] 0.2313333
mean(os_nb_precision)
## [1] 0.9423014
mean(os_nb_recall)
## [1] 0.08904382
mean(os_nb_f1)

```

```
## [1] 0.1579252
mean(smote_nb_accuracy)
## [1] 0.7426667
mean(smote_nb_precision)
## [1] 0.8341249
mean(smote_nb_recall)
## [1] 0.8645418
mean(smote_nb_f1)
## [1] 0.8463657
a <- matrix(
  c(mean(us_glm_accuracy),mean(us_glm_precision),mean(us_glm_recall),mean(us_glm_f1),
    mean(os_glm_accuracy),mean(os_glm_precision),mean(os_glm_recall),mean(os_glm_f1),
    mean(smote_glm_accuracy),mean(smote_glm_precision),mean(smote_glm_recall),mean(smote_glm_f1)),
    nrow=3,
    ncol=4,
    byrow = TRUE
)
a
##           [,1]      [,2]      [,3]      [,4]
## [1,] 0.7906667 0.8429621 0.9215139 0.8804215
## [2,] 0.5393333 0.8672775 0.5308765 0.6583295
## [3,] 0.7106667 0.8370220 0.8123506 0.8244403
```

Patients with hypertension

```
# Data before balancing
barplot(table(patients$hypertension), xlab=colnames(patients$hypertension))
```

Filter the data set to make sure we have only hypertension disease as the target

```
hypertension_set <- select(patients, gender, age, employment_status,  
education, marital_status, ancestry, available_vehicles, avg_commute, zipcode,  
children, daily_internet_use, military_service, hypertension)
```

Data is partitioned into a test and training set using a 70/30 split

```
train <- sample(nrow(hypertension_set), 0.7*nrow(hypertension_set), replace =  
FALSE)
```

```
TrainSet <- hypertension_set[train,]
```

```
TestSet <- hypertension_set[-train,]
```

```
response <- as.factor(patients$hypertension)
```

```
input <- select(patients, gender, age, employment_status, education,  
marital_status, ancestry)
```

Applying the Undersampling, oversampling, and smote to get a deep perspective of the data

Using Logistic Regression, Randomforest, and Naive Bayes Models in the data set

Initialize variables

```
us_glm_accuracy <- c()
```

```
us_glm_precision <- c()
```

```
us_glm_recall <- c()
```

```

us_glm_f1 <- c()

os_glm_accuracy <- c()
os_glm_precision <- c()
os_glm_recall <- c()
os_glm_f1 <- c()

smote_glm_accuracy <- c()
smote_glm_precision <- c()
smote_glm_recall <- c()
smote_glm_f1 <- c()

us_rf_accuracy <- c()
us_rf_precision <- c()
us_rf_recall <- c()
us_rf_f1 <- c()

os_rf_accuracy <- c()
os_rf_precision <- c()
os_rf_recall <- c()
os_rf_f1 <- c()

smote_rf_accuracy <- c()
smote_rf_precision <- c()
smote_rf_recall <- c()
smote_rf_f1 <- c()

us_nb_accuracy <- c()
us_nb_precision <- c()
us_nb_recall <- c()
us_nb_f1 <- c()

os_nb_accuracy <- c()
os_nb_precision <- c()
os_nb_recall <- c()
os_nb_f1 <- c()

smote_nb_accuracy <- c()
smote_nb_precision <- c()
smote_nb_recall <- c()
smote_nb_f1 <- c()

# Using the 10-fold cross-validation and repeating the step 3 times
train_control <- trainControl(method = "cv", number = 10)
metric <- "Accuracy"
mtry <- sqrt(ncol(alzheimer_set))
tunegrid <- expand.grid(.mtry=mtry)

```

```

# Iterating the sampling model 10 times to get the mean to get the best model for prediction

for (i in 1:10) {

  # Under sampling

ubUnder <- function(X= input, Y=response, perc=40, method="percPos"){
}
  data <- ubUnder(X=input, Y=response, perc=40, method="percPos")
  us_dataset <- cbind(data$X, class=data$Y)

  # Over sampling

ubOver <- function(X= input, Y=response, perc=40, method="percPos"){
}
  data <- ubOver(X=input, Y=response)
  os_dataset <- cbind(data$X, class=data$Y)

  # SMOTE

ubSMOTE <- function(X= input, Y=response, perc=40, method="percPos"){
}
  data <- ubSMOTE(X=input, Y=response)
  smote_dataset <- cbind(data$X, class=data$Y)

  # Using the 10-fold cross-validation and repeating the step 3 times
  train_control <- trainControl(method = "repeatedcv", number = 10,
repeats=3, savePredictions = TRUE)

  # Logistic regression for under sampling

glm_mod <- caret::train(class~.,data=us_dataset, trControl = train_control,
method="glm", family="binomial", tuneLength = 5)
  pred = predict(glm_mod, newdata=TestSet)
  us_cm <- confusionMatrix(data=pred, as.factor(TestSet$hypertension),
mode='everything')
  us_glm_accuracy <- c(us_glm_accuracy, us_cm$overall['Accuracy'])
  us_glm_precision <- c(us_glm_precision, us_cm$byClass['Precision'])
  us_glm_recall <- c(us_glm_recall, us_cm$byClass['Recall'])
  us_glm_f1 <- c(us_glm_f1, us_cm$byClass['F1'])

  # Logistic regression for oversampling
  glm_mod <- caret::train(class~.,data=os_dataset, trControl =
train_control, method="glm", family="binomial", tuneLength = 5)
  pred = predict(glm_mod, newdata=TestSet)
  os_cm <- confusionMatrix(data=pred, as.factor(TestSet$hypertension),

```

```

mode='everything')
os_glm_accuracy <- c(os_glm_accuracy, os_cm$overall['Accuracy'])
os_glm_precision <- c(os_glm_precision, os_cm$byClass['Precision'])
os_glm_recall <- c(os_glm_recall, os_cm$byClass['Recall'])
os_glm_f1 <- c(os_glm_f1, os_cm$byClass['F1'])

# Logistic regression for SMOTE

glm_mod <- caret::train(class~., data=smote_dataset, trControl =
train_control, method="glm", family="binomial", tuneLength = 5)
pred = predict(glm_mod, newdata=TestSet)
cm_smote <- confusionMatrix(data=pred, as.factor(TestSet$hypertension),
mode='everything')
smote_glm_accuracy <- c(smote_glm_accuracy, cm_smote$overall['Accuracy'])
smote_glm_precision <- c(smote_glm_precision,
cm_smote$byClass['Precision'])
smote_glm_recall <- c(smote_glm_recall, cm_smote$byClass['Recall'])
smote_glm_f1 <- c(smote_glm_f1, cm_smote$byClass['F1'])

# Random forest for under sampling
rf_mod <- caret::train(class~., data=us_dataset, method="rf",
metric=metric, tuneGrid=tunegrid, trControl=train_control)
pred = predict(rf_mod, newdata=TestSet)
us_cm <- confusionMatrix(data=pred, as.factor(TestSet$hypertension),
mode='everything')
us_rf_accuracy <- c(us_rf_accuracy, us_cm$overall['Accuracy'])
us_rf_precision <- c(us_rf_precision, us_cm$byClass['Precision'])
us_rf_recall <- c(us_rf_recall, us_cm$byClass['Recall'])
us_rf_f1 <- c(us_rf_f1, us_cm$byClass['F1'])

# Random forest for over sampling
rf_mod <- caret::train(class~., data=os_dataset, method="rf",
metric=metric, tuneGrid=tunegrid, trControl=train_control)
pred = predict(rf_mod, newdata=TestSet)
os_cm <- confusionMatrix(data=pred, as.factor(TestSet$hypertension),
mode='everything')
os_rf_accuracy <- c(os_rf_accuracy, os_cm$overall['Accuracy'])
os_rf_precision <- c(os_rf_precision, os_cm$byClass['Precision'])
os_rf_recall <- c(os_rf_recall, os_cm$byClass['Recall'])
os_rf_f1 <- c(os_rf_f1, os_cm$byClass['F1'])

# Random forest for SMOTE
rf_mod <- caret::train(class~., data=smote_dataset, method="rf",
metric=metric, tuneGrid=tunegrid, trControl=train_control)
pred = predict(rf_mod, newdata=TestSet)
cm_smote <- confusionMatrix(data=pred, as.factor(TestSet$hypertension),
mode='everything')
smote_rf_accuracy <- c(smote_rf_accuracy, cm_smote$overall['Accuracy'])
smote_rf_precision <- c(smote_rf_precision,
cm_smote$byClass['Precision'])

```

```

smote_rf_recall <- c(smote_rf_recall, cm_smote$byClass['Recall'])
smote_rf_f1 <- c(smote_rf_f1, cm_smote$byClass['F1'])

# Naive byes for under sampling
nb_mod <- caret::train(class~., data=us_dataset, method="nb",
trControl=train_control)
pred = predict(nb_mod, newdata=TestSet)
us_cm <- confusionMatrix(data=pred, as.factor(TestSet$hypertension),
mode='everything')
us_nb_accuracy <- c(us_nb_accuracy, us_cm$overall['Accuracy'])
us_nb_precision <- c(us_nb_precision, us_cm$byClass['Precision'])
us_nb_recall <- c(us_nb_recall, us_cm$byClass['Recall'])
us_nb_f1 <- c(us_nb_f1, us_cm$byClass['F1'])

# Naive byes for oversampling
nb_mod <- caret::train(class~., data=os_dataset, method="nb",
trControl=train_control)
pred = predict(nb_mod, newdata=TestSet)
os_cm <- confusionMatrix(data=pred, as.factor(TestSet$hypertension),
mode='everything')
os_nb_accuracy <- c(os_nb_accuracy, os_cm$overall['Accuracy'])
os_nb_precision <- c(os_nb_precision, os_cm$byClass['Precision'])
os_nb_recall <- c(os_nb_recall, os_cm$byClass['Recall'])
os_nb_f1 <- c(os_nb_f1, os_cm$byClass['F1'])

# Naive byes for SMOTE
nb_mod <- caret::train(class~., data=smote_dataset, method="nb",
trControl=train_control)
pred = predict(nb_mod, newdata=TestSet)
cm_smote <- confusionMatrix(data=pred, as.factor(TestSet$hypertension),
mode='everything')
smote_nb_accuracy <- c(smote_nb_accuracy, cm_smote$overall['Accuracy'])
smote_nb_precision <- c(smote_nb_precision,
cm_smote$byClass['Precision'])
smote_nb_recall <- c(smote_nb_recall, cm_smote$byClass['Recall'])
smote_nb_f1 <- c(smote_nb_f1, cm_smote$byClass['F1'])
}

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

```

[illegible]

```
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 4  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 48  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 73  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 16  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 53
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 277

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 336
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 217

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 243

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 304

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 309

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 291

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 225

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 274

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 292

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 298

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 244

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 294

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 275

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 276

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 239

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 238

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 304

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 285

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 272

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 225

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 277

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 213

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 292

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 94
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 278

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 269

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 177

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 180

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 186

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 186

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 254

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 223

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 249

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 301

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 308

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 288

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 272
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 296

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 235

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 232

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 229

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 238

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 300

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 305

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 291
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 280

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 259

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 299

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 339

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 259

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 288

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 232

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 239

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 276

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 270

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 275

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 313

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 336

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 339

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 316

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 317

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 285

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 94

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 86

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 86

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 232

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 337

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 338

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 249

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 299

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 316

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 298

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 260

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 250

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 296

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 243

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 312

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 264

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 294

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 217

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 225

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 338

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 239

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 272

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 291

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 232

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 311

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 303

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 213

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 276

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 311

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 270

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 245

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 274

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 301

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 259
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 249

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 94

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 180

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 180

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 186

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 281

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 281

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 259

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 249

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 300

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 306

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 228

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 316

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 274

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 296

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 335

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 232

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 251

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 335

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 341

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 247

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 285

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 217

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 260

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 223

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 311

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 238

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 272

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 264

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 309

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 225

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 260

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 308

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 259

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 291

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 251

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 278

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 233

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 292

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 185

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 94

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 181

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 185

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 311

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 600

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 260

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 288

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 247

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 277

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 269

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 237

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 269

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 306

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 305

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 272

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 225

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 261

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 252

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 308

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 252

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 213
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 289

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 94

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 303

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 247

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 252

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 273

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 312
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 278

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 281

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 177

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 181

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 183

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 186

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 185

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
```


[illegible]

```
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 267

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 270

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 297

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 309

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 229
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 254

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 260

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 257

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 228

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 272

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 291

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 235

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 311

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 252

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 218

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 238

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 310

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 335

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 297

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 236

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 266

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 293

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 310
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 234

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 274

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 272

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 239

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 213

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 286

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 304

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 177

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 86

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 94

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 273

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 298

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 249

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 293
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 223

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 273

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 314

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 274

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 311

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 317

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 335

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 336

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 86
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 225

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 234

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 243

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 283
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 281

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 286

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 229

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 261

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 287

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 265

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 86

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 291

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 218

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 260

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 309

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 280

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 217

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 285

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 249

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 269

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 276

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 297

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 181

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 183

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 185

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 181

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 185

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 180

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 180

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 108

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 225

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 311

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419
```

[illegible]

[illegible]

```
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 12  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 71  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 74  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 73  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 28  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 60  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 14  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 29  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 46  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 66  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 37  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 58  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 69
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 314

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 278

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 232

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 276

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 279
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 317

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 247

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 335

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 336

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 254

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 309

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 310

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 253
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 291

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 260

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 269

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 266

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 261

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 250

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 276

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 163

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 250

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 293

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 247

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 259

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 186

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 296

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 289

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 312

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 266

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 300

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 243

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 286

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 295

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 317

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 239

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 109

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 217

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 225

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 336

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 337

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 284

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 129
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 177

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 181

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 181

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 180

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194
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```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 181

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 203

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 205

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307
```

[illegible]

[illegible]

```
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =  
## ifelse(type == : prediction from a rank-deficient fit may be misleading  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 36  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 17  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 19  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 2  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 25  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 45  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 46  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 12  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 61  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 13  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 72  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 24  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 55  
  
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with  
## observation 33
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 50

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 65

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 310

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 313

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 314

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 292

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 314

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 239

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 288
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 309

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 240
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 247

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 248

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 303

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 216

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 120

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 235

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 228

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 309

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 251

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 259

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 252

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 285

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 250

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 266

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 13

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 250

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 318

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 195

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 289

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 280

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 315

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 200

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 201

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 298

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 235

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 278

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 279

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 324

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 214

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 235

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 300

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 261

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 334
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 335

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 275

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 299

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 320

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 86

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 79

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 184

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 80

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 138

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 202

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 136

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 168

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 37

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 11

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 183

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 35

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 42
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 85

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 185

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 122
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 307

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 41

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 32

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 44

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 5

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 36

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 9

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 28

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 68
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 21

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 213

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 239

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 332

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 158
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 304

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 17

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 132

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 230

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 276

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 290

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 95

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 147
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 215

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 260

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 300

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 220

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 263

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 267

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 170
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 219

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 305

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 336

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 255

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 2

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 137

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 55

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 258

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 335

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 267

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 268

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 319

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 105

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 259

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 333

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 211

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 71

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 115

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 289

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 325

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 227

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 246

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 282

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 148

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 270

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 329

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 222

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 244

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 306

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 295

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 328

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 144

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 1

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 327

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 62

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 139

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 143

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 152

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 256

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 69

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 153

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 154

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 242

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 321

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 322

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 323

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 82

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 127

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 289

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 308

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 314

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 34

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 223

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 224

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 288

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 221

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 226

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 231

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 250

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 330

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 66

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 76

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 204

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 326

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 72

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 262

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 29

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 67
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 123

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 249

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 301

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 331

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 117

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 92

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 186

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 48
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 77

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 91

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 99

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 119

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 183

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 185

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 197

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 24

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 25

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 39

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 43

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 64

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 135

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 169

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 18
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 90

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 93

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 113

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 188

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 47

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 160

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 146

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 87

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 112

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 51

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 118

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 172

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 192

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 206

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 23

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 31

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 63

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 130

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 134

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 142

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 145

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 191

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 6

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 74

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 151

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 14

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 26

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 75

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 81
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 131

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 3

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 8

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 114

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 128

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 167

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 7

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 46

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 111

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 173

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 181

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 207

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 33

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 53
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 96

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 106

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 61

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 73

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 110

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 121

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 171

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 178

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 78

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 141

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 149

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 159

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 88

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 174

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 27

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 49

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 98

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 156

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 133

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 166

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 176

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 83

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 107

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 164

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 38

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 58
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 70

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 22

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 102

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 208

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 54

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 116

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 165

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 193

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 194

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 199

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 10

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 89

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 103

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 126

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 182
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 196

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 12

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 16

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 52

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 84

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 155

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 4

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 19

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 20

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 45

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 59

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 100

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 125

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 150

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 185
```

```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 15

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 30

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 40

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 57

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 97

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 101

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 157

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 175

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 189

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 56

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 60

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 104

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 124

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 179

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 187

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 198

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 140

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 161
```



```
## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 162

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 190

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 209

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 210

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 212

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 302

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 419

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 450

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 457

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 553

## Warning in FUN(X[[i]], ...): Numerical 0 probability for all classes with
## observation 575
```

Hypertension analysis

Data is partitioned into a test and training set using a 70/30 split

```
df <- data.frame(us_glm_accuracy, os_glm_accuracy, smote_glm_accuracy,
us_rf_accuracy, os_rf_accuracy, smote_rf_accuracy, us_nb_accuracy,
os_nb_accuracy, smote_nb_accuracy)

us_glm_accuracy

## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.8666667 0.8300000 0.8683333 0.8200000 0.8283333 0.8700000 0.8600000
## Accuracy Accuracy Accuracy
## 0.8700000 0.8300000 0.8016667

os_glm_accuracy

## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.4950000 0.5283333 0.5283333 0.5200000 0.5116667 0.5183333 0.5483333
```

```
## Accuracy Accuracy Accuracy
## 0.5166667 0.5083333 0.4900000
```

smote_glm_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.7933333 0.7716667 0.7683333 0.7700000 0.7916667 0.8100000 0.7850000
## Accuracy Accuracy Accuracy
## 0.7850000 0.7983333 0.8083333
```

us_rf_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.8566667 0.8233333 0.8666667 0.8516667 0.8583333 0.8683333 0.8750000
## Accuracy Accuracy Accuracy
## 0.8766667 0.8483333 0.8600000
```

os_rf_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.5216667 0.4933333 0.5883333 0.5650000 0.5866667 0.5866667 0.6066667
## Accuracy Accuracy Accuracy
## 0.5583333 0.5633333 0.5366667
```

smote_rf_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.8250000 0.8250000 0.7950000 0.8400000 0.8350000 0.8400000 0.8066667
## Accuracy Accuracy Accuracy
## 0.8316667 0.8150000 0.8383333
```

us_nb_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.8716667 0.8550000 0.8716667 0.8716667 0.8716667 0.8716667 0.8716667
## Accuracy Accuracy Accuracy
## 0.8716667 0.8716667 0.8716667
```

os_nb_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.1566667 0.1566667 0.1566667 0.1683333 0.1583333 0.2483333 0.1583333
## Accuracy Accuracy Accuracy
## 0.1916667 0.2250000 0.1566667
```

smote_nb_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.8116667 0.7833333 0.7566667 0.7733333 0.8016667 0.8016667 0.7966667
## Accuracy Accuracy Accuracy
## 0.8100000 0.7750000 0.8116667
```

us_glm_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8735245 0.8779174 0.8712375 0.8779599 0.8763441 0.8739496 0.8884956
## Precision Precision Precision
## 0.8739496 0.8752228 0.8754647
```

os_glm_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8956835 0.8973510 0.9054054 0.8929766 0.8859060 0.8774194 0.8962264
## Precision Precision Precision
## 0.8949153 0.8958333 0.8945455
```

smote_glm_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8858801 0.8906883 0.8855422 0.8857715 0.8871595 0.8865784 0.8877953
## Precision Precision Precision
## 0.8862745 0.8910506 0.8893130
```

us_rf_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8894831 0.8897196 0.8892794 0.8931159 0.8996350 0.8867596 0.8985765
## Precision Precision Precision
## 0.8824532 0.9044944 0.8969259
```

os_rf_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.9436090 0.9294118 0.9339623 0.9366667 0.9421222 0.9283489 0.9335347
## Precision Precision Precision
## 0.9271523 0.9364548 0.9328622
```

smote_rf_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8899254 0.8943396 0.8891051 0.8917431 0.8925926 0.8903108 0.8921002
## Precision Precision Precision
## 0.8892989 0.8916350 0.8915441
```

us_nb_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8716667 0.8758621 0.8716667 0.8729097 0.8716667 0.8716667 0.8716667
## Precision Precision Precision
## 0.8716667 0.8716667 0.8716667
```

os_nb_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.9047619 0.9047619 0.9047619 0.8750000 0.8461538 0.8829787 0.9090909
## Precision Precision Precision
## 0.9130435 0.8918919 0.9047619
```

smote_nb_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8867925 0.8891089 0.8854806 0.8862275 0.8854962 0.8869732 0.8893204
## Precision Precision Precision
## 0.8880455 0.8864542 0.8867925
```

us_glm_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.9904398 0.9349904 0.9961759 0.9216061 0.9349904 0.9942639 0.9598470
## Recall Recall Recall
## 0.9942639 0.9388145 0.9005736
```

os_glm_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.4760994 0.5181644 0.5124283 0.5105163 0.5047801 0.5200765 0.5449331
## Recall Recall Recall
## 0.5047801 0.4933078 0.4703633
```

smote_glm_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.8757170 0.8413002 0.8432122 0.8451243 0.8718929 0.8967495 0.8623327
## Recall Recall Recall
## 0.8642447 0.8757170 0.8910134
```

us_rf_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.9541109 0.9101338 0.9674952 0.9426386 0.9426386 0.9732314 0.9655832
## Recall Recall Recall
## 0.9904398 0.9235182 0.9483748
```

os_rf_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.4799235 0.4531549 0.5678776 0.5372849 0.5602294 0.5697897 0.5908222
## Recall Recall Recall
## 0.5353728 0.5353728 0.5047801
```

smote_rf_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.9120459 0.9063098 0.8738050 0.9292543 0.9216061 0.9311663 0.8852772
## Recall Recall Recall
## 0.9216061 0.8967495 0.9273423
```

us_nb_recall

```
## Recall Recall Recall Recall Recall Recall Recall
## 1.0000000 0.9713193 1.0000000 0.9980880 1.0000000 1.0000000 1.0000000
```

```
##      Recall      Recall      Recall
## 1.0000000 1.0000000 1.0000000
```

os_nb_recall

```
##      Recall      Recall      Recall      Recall      Recall      Recall
## 0.03632887 0.03632887 0.03632887 0.05353728 0.04206501 0.15869981
##      Recall      Recall      Recall      Recall
## 0.03824092 0.08030593 0.12619503 0.03632887
```

smote_nb_recall

```
##      Recall      Recall      Recall      Recall      Recall      Recall      Recall
## 0.8986616 0.8585086 0.8279159 0.8489484 0.8871893 0.8852772 0.8757170
##      Recall      Recall      Recall
## 0.8948375 0.8508604 0.8986616
```

us_glm_f1

```
##      F1      F1      F1      F1      F1      F1      F1
## 0.9283154 0.9055556 0.9295272 0.8992537 0.9047179 0.9302326 0.9227941
##      F1      F1      F1
## 0.9302326 0.9059041 0.8878417
```

os_glm_f1

```
##      F1      F1      F1      F1      F1      F1      F1
## 0.6217228 0.6569697 0.6544567 0.6496350 0.6431181 0.6530612 0.6777646
##      F1      F1      F1
## 0.6454768 0.6362515 0.6165414
```

smote_glm_f1

```
##      F1      F1      F1      F1      F1      F1      F1
## 0.8807692 0.8652901 0.8638590 0.8649706 0.8794600 0.8916350 0.8748788
##      F1      F1      F1
## 0.8751210 0.8833173 0.8901624
```

us_rf_f1

```
##      F1      F1      F1      F1      F1      F1      F1
## 0.9206642 0.8998110 0.9267399 0.9172093 0.9206349 0.9279854 0.9308756
##      F1      F1      F1
## 0.9333333 0.9139073 0.9219331
```

os_rf_f1

```
##      F1      F1      F1      F1      F1      F1      F1
## 0.6362484 0.6092545 0.7063020 0.6828676 0.7026379 0.7061611 0.7236534
##      F1      F1      F1
## 0.6787879 0.6812652 0.6550868
```

smote_rf_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.9008499 0.9002849 0.8813886 0.9101124 0.9068674 0.9102804 0.8886756
##          F1          F1          F1
## 0.9051643 0.8941849 0.9090909
```

us_nb_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.9314337 0.9211242 0.9314337 0.9313113 0.9314337 0.9314337 0.9314337
##          F1          F1          F1
## 0.9314337 0.9314337 0.9314337
```

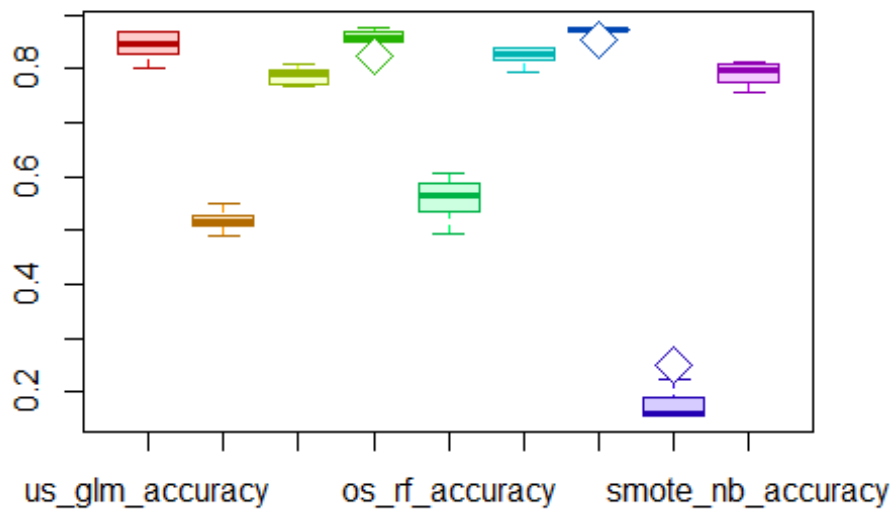
os_nb_f1

```
##          F1          F1          F1          F1          F1          F1
## 0.06985294 0.06985294 0.06985294 0.10090090 0.08014572 0.26904376
##          F1          F1          F1          F1
## 0.07339450 0.14762742 0.22110553 0.06985294
```

smote_nb_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.8926876 0.8735409 0.8557312 0.8671875 0.8863419 0.8861244 0.8824663
##          F1          F1          F1
## 0.8914286 0.8682927 0.8926876
```

```
c1 <- rainbow(10)
c2 <- rainbow(10, alpha=0.2)
c3 <- rainbow(10, v=0.7)
boxplot(df, col=c2, medcol=c3, whiskcol=c1, staplecol=c3, boxcol=c3,
outcol=c3, pch=23, cex=2)
```

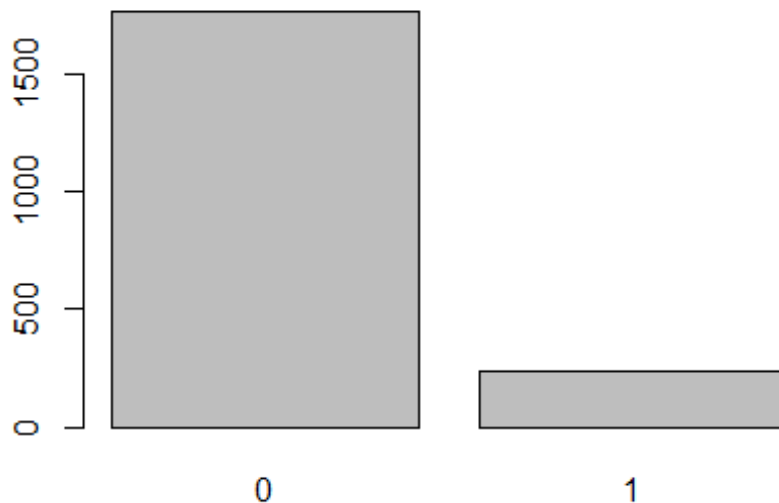


```
mean(us_nb_accuracy)
## [1] 0.87
mean(us_nb_precision)
## [1] 0.8722105
mean(us_nb_recall)
## [1] 0.9969407
mean(us_nb_f1)
## [1] 0.9303905
mean(os_nb_accuracy)
## [1] 0.1776667
mean(os_nb_precision)
## [1] 0.8937206
mean(os_nb_recall)
## [1] 0.06443595
mean(os_nb_f1)
```

```
## [1] 0.117163
mean(smote_nb_accuracy)
## [1] 0.7921667
mean(smote_nb_precision)
## [1] 0.8870691
mean(smote_nb_recall)
## [1] 0.8726577
mean(smote_nb_f1)
## [1] 0.8796489
a <- matrix(
  c(mean(us_glm_accuracy),mean(us_glm_precision),mean(us_glm_recall),mean(us_glm_f1),
    mean(os_glm_accuracy),mean(os_glm_precision),mean(os_glm_recall),mean(os_glm_f1),
    mean(smote_glm_accuracy),mean(smote_glm_precision),mean(smote_glm_recall),mean(smote_glm_f1)),
    nrow=3,
    ncol=4,
    byrow = TRUE
)
a
##           [,1]      [,2]      [,3]      [,4]
## [1,] 0.8445000 0.8764066 0.9565966 0.9144375
## [2,] 0.5165000 0.8936262 0.5055449 0.6454998
## [3,] 0.7881667 0.8876053 0.8667304 0.8769463
```

Patients with skin cancer

```
# Data before balancing
barplot(table(patients$skin_cancer), xlab=colnames(patients$skin_cancer))
```

```
#Filtering the data set to have only skin_cancer disease as the target  
skin_cancer_set <- select(patients, gender, age, employment_status,  
education, marital_status, ancestry, available_vehicles, avg_commute, zipcode,  
children, daily_internet_use, military_service, skin_cancer)
```

```
#Data is partitioned into a test and training set using a 70/30 split  
train <- sample(nrow(skin_cancer_set), 0.7*nrow(skin_cancer_set), replace =  
FALSE)  
TrainSet <- skin_cancer_set[train,]  
TestSet <- skin_cancer_set[-train,]
```

```
response <- as.factor(patients$skin_cancer)  
input <- select(patients, gender, age, employment_status, education,  
marital_status, ancestry)
```

Applying the Undersampling, oversampling, and smote to get a deep perspective of the data

Using Logistic Regression, Randomforest, and Naive Bayes Models in the data set

Initialize variables

```
us_glm_accuracy <- c()  
us_glm_precision <- c()  
us_glm_recall <- c()  
us_glm_f1 <- c()
```

```
os_glm_accuracy <- c()  
os_glm_precision <- c()  
os_glm_recall <- c()  
os_glm_f1 <- c()
```

```
smote_glm_accuracy <- c()  
smote_glm_precision <- c()  
smote_glm_recall <- c()  
smote_glm_f1 <- c()
```

```
us_rf_accuracy <- c()  
us_rf_precision <- c()  
us_rf_recall <- c()  
us_rf_f1 <- c()
```

```
os_rf_accuracy <- c()  
os_rf_precision <- c()  
os_rf_recall <- c()  
os_rf_f1 <- c()
```

```
smote_rf_accuracy <- c()  
smote_rf_precision <- c()  
smote_rf_recall <- c()  
smote_rf_f1 <- c()
```

```
us_nb_accuracy <- c()  
us_nb_precision <- c()  
us_nb_recall <- c()  
us_nb_f1 <- c()
```

```
os_nb_accuracy <- c()  
os_nb_precision <- c()  
os_nb_recall <- c()  
os_nb_f1 <- c()
```

```
smote_nb_accuracy <- c()  
smote_nb_precision <- c()  
smote_nb_recall <- c()  
smote_nb_f1 <- c()
```

Using the 10-fold cross-validation and repeating the step 3 times

```
train_control <- trainControl(method = "cv", number = 10)  
metric <- "Accuracy"
```

```

mtry <- sqrt(ncol(skin_cancer_set))
tuneGrid <- expand.grid(.mtry=mtry)

# Iterating the sampling model 10 times to get the mean to get the best model for prediction
for (i in 1:10) {

  # Under sampling

ubUnder <- function(X= input, Y=response, perc=40, method="percPos"){
}

  data <- ubUnder(X=input, Y=response, perc=40, method="percPos")
  us_dataset <- cbind(data$X, class=data$Y)

  # Over sampling

ubOver <- function(X= input, Y=response, perc=40, method="percPos"){
}

  data <- ubOver(X=input, Y=response)
  os_dataset <- cbind(data$X, class=data$Y)

  # SMOTE

ubSMOTE <- function(X= input, Y=response, perc=40, method="percPos"){
}

  data <- ubSMOTE(X=input, Y=response)
  smote_dataset <- cbind(data$X, class=data$Y)

  # Using the 10-fold cross-validation and repeating the step 3 times
train_control <- trainControl(method = "repeatedcv", number = 10, repeats=3,
savePredictions = TRUE)

  # Logistic regression for under sampling
glm_mod <- caret::train(class~.,data=us_dataset, trControl =
train_control, method="glm", family="binomial", tuneLength = 5)
pred = predict(glm_mod, newdata=TestSet)
us_cm <- confusionMatrix(data=pred, as.factor(TestSet$skin_cancer),
mode='everything')
us_glm_accuracy <- c(us_glm_accuracy, us_cm$overall['Accuracy'])
us_glm_precision <- c(us_glm_precision, us_cm$byClass['Precision'])
us_glm_recall <- c(us_glm_recall, us_cm$byClass['Recall'])
us_glm_f1 <- c(us_glm_f1, us_cm$byClass['F1'])

  # Logistic regression for oversampling
glm_mod <- caret::train(class~.,data=os_dataset, trControl =
train_control, method="glm", family="binomial", tuneLength = 5)

```

```

    pred = predict(glm_mod, newdata=TestSet)
    os_cm <- confusionMatrix(data=pred, as.factor(TestSet$skin_cancer),
mode='everything')
    os_glm_accuracy <- c(os_glm_accuracy, os_cm$overall['Accuracy'])
    os_glm_precision <- c(os_glm_precision, os_cm$byClass['Precision'])
    os_glm_recall <- c(os_glm_recall, os_cm$byClass['Recall'])
    os_glm_f1 <- c(os_glm_f1, os_cm$byClass['F1'])

# Logistic regression for SMOTE
    glm_mod <- caret::train(class~., data=smote_dataset, trControl =
train_control, method="glm", family="binomial", tuneLength = 5)
    pred = predict(glm_mod, newdata=TestSet)
    cm_smote <- confusionMatrix(data=pred, as.factor(TestSet$skin_cancer),
mode='everything')
    smote_glm_accuracy <- c(smote_glm_accuracy, cm_smote$overall['Accuracy'])
    smote_glm_precision <- c(smote_glm_precision,
cm_smote$byClass['Precision'])
    smote_glm_recall <- c(smote_glm_recall, cm_smote$byClass['Recall'])
    smote_glm_f1 <- c(smote_glm_f1, cm_smote$byClass['F1'])

# Random forest for under sampling
    rf_mod <- caret::train(class~., data=us_dataset, method="rf",
metric=metric, tuneGrid=tunegrid, trControl=train_control)
    pred = predict(rf_mod, newdata=TestSet)
    us_cm <- confusionMatrix(data=pred, as.factor(TestSet$skin_cancer),
mode='everything')
    us_rf_accuracy <- c(us_rf_accuracy, us_cm$overall['Accuracy'])
    us_rf_precision <- c(us_rf_precision, us_cm$byClass['Precision'])
    us_rf_recall <- c(us_rf_recall, us_cm$byClass['Recall'])
    us_rf_f1 <- c(us_rf_f1, us_cm$byClass['F1'])

# Random forest for over sampling

    rf_mod <- caret::train(class~., data=os_dataset, method="rf",
metric=metric, tuneGrid=tunegrid, trControl=train_control)
    pred = predict(rf_mod, newdata=TestSet)
    os_cm <- confusionMatrix(data=pred, as.factor(TestSet$skin_cancer),
mode='everything')
    os_rf_accuracy <- c(os_rf_accuracy, os_cm$overall['Accuracy'])
    os_rf_precision <- c(os_rf_precision, os_cm$byClass['Precision'])
    os_rf_recall <- c(os_rf_recall, os_cm$byClass['Recall'])
    os_rf_f1 <- c(os_rf_f1, os_cm$byClass['F1'])

# Random forest for SMOTE
    rf_mod <- caret::train(class~., data=smote_dataset, method="rf",
metric=metric, tuneGrid=tunegrid, trControl=train_control)
    pred = predict(rf_mod, newdata=TestSet)
    cm_smote <- confusionMatrix(data=pred, as.factor(TestSet$skin_cancer),
mode='everything')
    smote_rf_accuracy <- c(smote_rf_accuracy, cm_smote$overall['Accuracy'])

```

```

    smote_rf_precision <- c(smote_rf_precision,
cm_smote$byClass['Precision'])
    smote_rf_recall <- c(smote_rf_recall, cm_smote$byClass['Recall'])
    smote_rf_f1 <- c(smote_rf_f1, cm_smote$byClass['F1'])

    # Naive byes for under sampling
    nb_mod <- caret::train(class~., data=us_dataset, method="nb",
trControl=train_control)
    pred = predict(nb_mod, newdata=TestSet)
    us_cm <- confusionMatrix(data=pred, as.factor(TestSet$skin_cancer),
mode='everything')
    us_nb_accuracy <- c(us_nb_accuracy, us_cm$overall['Accuracy'])
    us_nb_precision <- c(us_nb_precision, us_cm$byClass['Precision'])
    us_nb_recall <- c(us_nb_recall, us_cm$byClass['Recall'])
    us_nb_f1 <- c(us_nb_f1, us_cm$byClass['F1'])

    # Naive byes for oversampling
    nb_mod <- caret::train(class~., data=os_dataset, method="nb",
trControl=train_control)
    pred = predict(nb_mod, newdata=TestSet)
    os_cm <- confusionMatrix(data=pred, as.factor(TestSet$skin_cancer),
mode='everything')
    os_nb_accuracy <- c(os_nb_accuracy, os_cm$overall['Accuracy'])
    os_nb_precision <- c(os_nb_precision, os_cm$byClass['Precision'])
    os_nb_recall <- c(os_nb_recall, os_cm$byClass['Recall'])
    os_nb_f1 <- c(os_nb_f1, os_cm$byClass['F1'])

    # Naive byes for SMOTE
    nb_mod <- caret::train(class~., data=smote_dataset, method="nb",
trControl=train_control)
    pred = predict(nb_mod, newdata=TestSet)
    cm_smote <- confusionMatrix(data=pred, as.factor(TestSet$skin_cancer),
mode='everything')
    smote_nb_accuracy <- c(smote_nb_accuracy, cm_smote$overall['Accuracy'])
    smote_nb_precision <- c(smote_nb_precision,
cm_smote$byClass['Precision'])
    smote_nb_recall <- c(smote_nb_recall, cm_smote$byClass['Recall'])
    smote_nb_f1 <- c(smote_nb_f1, cm_smote$byClass['F1'])
  }

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
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## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

```

[illegible]

```
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

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## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold06.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold07.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold08.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold09.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```



```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning: model fit failed for Fold06.Rep2: usekernel=FALSE, fL=0, adjust=1
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## Warning: model fit failed for Fold09.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold03.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold07.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in train.default(x, y, weights = w, ...): missing values found in
## aggregated results

## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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employment_statusstudent

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## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold08.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold09.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
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## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep3: usekernel=FALSE, fL=0, adjust=1
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## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
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## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
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## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Zero variances for at least one class in variables:
employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Zero variances for at least one class in variables:
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## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
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## Warning: model fit failed for Fold01.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
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## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.
```

[illegible]

[illegible]

```
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent
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## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Zero variances for at least one class in variables:
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold05.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold06.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

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## Warning: model fit failed for Fold08.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold09.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

[illegible]

[illegible]

```
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning: model fit failed for Fold09.Rep1: usekernel=FALSE, fL=0, adjust=1
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employment_statusstudent

## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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## Warning: model fit failed for Fold01.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
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```
## Warning in train.default(x, y, weights = w, ...): missing values found in
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## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
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```

```
## Warning in train.default(x, y, weights = w, ...): missing values found in
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## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
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## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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## Zero variances for at least one class in variables:
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## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
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```
## Warning in train.default(x, y, weights = w, ...): missing values found in
## aggregated results

## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```



```
## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
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## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.
```

```
## Warning in train.default(x, y, weights = w, ...): missing values found in
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
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## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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```


[illegible]

[illegible]

```
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold05.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold06.Rep1: usekernel=FALSE, fL=0, adjust=1
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## Warning: model fit failed for Fold09.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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## Warning: model fit failed for Fold10.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =  
## trainInfo, : There were missing values in resampled performance measures.  
  
## Warning in train.default(x, y, weights = w, ...): missing values found in  
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :  
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employment_statusstudent
```

```
## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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```
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
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```

[illegible]

[illegible]

```
## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning: model fit failed for Fold10.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```

## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
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employment_statusstudent

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

```



```
## Warning in train.default(x, y, weights = w, ...): missing values found in
## aggregated results

## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
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## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
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```
## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
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```
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employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

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[illegible]

[illegible]


```
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
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## Zero variances for at least one class in variables:
employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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```
## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
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## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold05.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold06.Rep1: usekernel=FALSE, fL=0, adjust=1
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employment_statusstudent
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```
## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
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```

[illegible]

[illegible]

```
## ifelse(type == : prediction from a rank-deficient fit may be misleading

## Warning in predict.lm(object, newdata, se.fit, scale = 1, type =
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employment_statusstudent

## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
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## Warning: model fit failed for Fold03.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

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employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

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## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
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Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
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employment_statusstudent

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## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
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## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold07.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold08.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold09.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold06.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold07.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold08.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold09.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in train.default(x, y, weights = w, ...): missing values found in
## aggregated results

## Warning: model fit failed for Fold01.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold06.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold07.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold08.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold09.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep1: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold06.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold07.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent
```

```
## Warning: model fit failed for Fold08.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold09.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep2: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold01.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold02.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold03.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold04.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold05.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold06.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold07.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold08.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
```

```
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold09.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning: model fit failed for Fold10.Rep3: usekernel=FALSE, fL=0, adjust=1
Error in NaiveBayes.default(x, y, usekernel = FALSE, fL = param$fL, ...) :
## Zero variances for at least one class in variables:
employment_statusstudent

## Warning in nominalTrainWorkflow(x = x, y = y, wts = weights, info =
## trainInfo, : There were missing values in resampled performance measures.

## Warning in train.default(x, y, weights = w, ...): missing values found in
## aggregated results
```

Skin cancer analysis

Data is partitioned into a test and training set using a 70/30 split

```
df <- data.frame(us_glm_accuracy, os_glm_accuracy, smote_glm_accuracy,
us_rf_accuracy, os_rf_accuracy, smote_rf_accuracy, us_nb_accuracy,
os_nb_accuracy, smote_nb_accuracy)

us_glm_accuracy

## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.8583333 0.8633333 0.7966667 0.8566667 0.8416667 0.8550000 0.7816667
## Accuracy Accuracy Accuracy
## 0.7866667 0.8000000 0.8583333

os_glm_accuracy

## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.4583333 0.5216667 0.5066667 0.4950000 0.5166667 0.5700000 0.5550000
## Accuracy Accuracy Accuracy
## 0.5300000 0.5383333 0.5150000

smote_glm_accuracy

## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.7600000 0.7483333 0.7266667 0.8016667 0.7000000 0.7566667 0.7316667
## Accuracy Accuracy Accuracy
## 0.7266667 0.7750000 0.7833333

us_rf_accuracy
```

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.7933333 0.7916667 0.8316667 0.7883333 0.7833333 0.7950000 0.7266667
## Accuracy Accuracy Accuracy
## 0.7800000 0.7816667 0.7833333
```

os_rf_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.6200000 0.6166667 0.5983333 0.6150000 0.6033333 0.6583333 0.5933333
## Accuracy Accuracy Accuracy
## 0.5716667 0.6116667 0.6133333
```

smote_rf_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.7583333 0.7600000 0.7650000 0.8150000 0.7583333 0.7716667 0.7750000
## Accuracy Accuracy Accuracy
## 0.7900000 0.7800000 0.8016667
```

us_nb_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89
## Accuracy Accuracy
## 0.89 0.89
```

os_nb_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89
## Accuracy Accuracy
## 0.89 0.89
```

smote_nb_accuracy

```
## Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy
## 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89
## Accuracy Accuracy
## 0.89 0.89
```

us_glm_precision

```
## Precision Precision Precision Precision Precision Precision Precision Precision
## 0.8904348 0.8937282 0.8872180 0.8902439 0.8884956 0.8955752 0.8912621
## Precision Precision Precision
## 0.8949416 0.8950382 0.8945518
```

os_glm_precision

```
## Precision Precision Precision Precision Precision Precision Precision Precision
## 0.9300412 0.9363958 0.9190141 0.9325843 0.9178082 0.9259259 0.9320388
## Precision Precision Precision
## 0.9405594 0.9415808 0.9323843
```

smote_glm_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.8963415 0.8900204 0.8886555 0.8922495 0.8915929 0.8927126 0.8909853
## Precision Precision Precision
## 0.8936170 0.8966203 0.8976378
```

us_rf_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.9133065 0.9081836 0.9046729 0.9178645 0.9122449 0.9134809 0.9166667
## Precision Precision Precision
## 0.9068826 0.9137577 0.9105691
```

os_rf_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.9526627 0.9418605 0.9535604 0.9291785 0.9539877 0.9506849 0.9503106
## Precision Precision Precision
## 0.9482201 0.9492537 0.9548193
```

smote_rf_precision

```
## Precision Precision Precision Precision Precision Precision Precision
## 0.9026915 0.9079498 0.9051546 0.9043977 0.9043659 0.9042770 0.9079755
## Precision Precision Precision
## 0.8953488 0.9068826 0.9060665
```

us_nb_precision

```
## Precision Precision Precision Precision Precision Precision Precision
##      0.89      0.89      0.89      0.89      0.89      0.89      0.89
## Precision Precision Precision
##      0.89      0.89      0.89
```

os_nb_precision

```
## Precision Precision Precision Precision Precision Precision Precision
##      0.89      0.89      0.89      0.89      0.89      0.89      0.89
## Precision Precision Precision
##      0.89      0.89      0.89
```

smote_nb_precision

```
## Precision Precision Precision Precision Precision Precision Precision
##      0.89      0.89      0.89      0.89      0.89      0.89      0.89
## Precision Precision Precision
##      0.89      0.89      0.89
```

us_glm_recall

```
##      Recall      Recall      Recall      Recall      Recall      Recall      Recall
## 0.9588015 0.9606742 0.8838951 0.9569288 0.9400749 0.9475655 0.8595506
```



```
## Recall Recall Recall
## 0.8614232 0.8782772 0.9531835
```

```
os_glm_recall
```

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.4232210 0.4962547 0.4887640 0.4662921 0.5018727 0.5617978 0.5393258
## Recall Recall Recall
## 0.5037453 0.5131086 0.4906367
```

```
smote_glm_recall
```

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.8258427 0.8183521 0.7921348 0.8838951 0.7546816 0.8258427 0.7958801
## Recall Recall Recall
## 0.7865169 0.8445693 0.8539326
```

```
us_rf_recall
```

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.8483146 0.8520599 0.9063670 0.8370787 0.8370787 0.8501873 0.7621723
## Recall Recall Recall
## 0.8389513 0.8333333 0.8389513
```

```
os_rf_recall
```

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.6029963 0.6067416 0.5767790 0.6142322 0.5823970 0.6498127 0.5730337
## Recall Recall Recall
## 0.5486891 0.5955056 0.5936330
```

```
smote_rf_recall
```

```
## Recall Recall Recall Recall Recall Recall Recall
## 0.8164794 0.8127341 0.8220974 0.8857678 0.8146067 0.8314607 0.8314607
## Recall Recall Recall
## 0.8651685 0.8389513 0.8670412
```

```
us_nb_recall
```

```
## Recall Recall Recall Recall Recall Recall Recall Recall Recall Recall Recall
## 1 1 1 1 1 1 1 1 1 1 1
```

```
os_nb_recall
```

```
## Recall Recall Recall Recall Recall Recall Recall Recall Recall Recall Recall
## 1 1 1 1 1 1 1 1 1 1 1
```

```
smote_nb_recall
```

```
## Recall Recall Recall Recall Recall Recall Recall Recall Recall Recall Recall
## 1 1 1 1 1 1 1 1 1 1 1
```

```
us_glm_f1
```

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.9233544 0.9259928 0.8855535 0.9223827 0.9135578 0.9208371 0.8751192
##          F1          F1          F1
## 0.8778626 0.8865784 0.9229374
```

os_glm_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.5817246 0.6487148 0.6381418 0.6217228 0.6489104 0.6993007 0.6832740
##          F1          F1          F1
## 0.6560976 0.6642424 0.6429448
```

smote_glm_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.8596491 0.8526829 0.8376238 0.8880527 0.8174442 0.8579767 0.8407517
##          F1          F1          F1
## 0.8366534 0.8698168 0.8752399
```

us_rf_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.8796117 0.8792271 0.9055192 0.8756121 0.8730469 0.8806984 0.8323108
##          F1          F1          F1
## 0.8715953 0.8716944 0.8732943
```

os_rf_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.7385321 0.7380410 0.7187865 0.7395716 0.7232558 0.7719689 0.7149533
##          F1          F1          F1
## 0.6951364 0.7318757 0.7321016
```

smote_rf_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.8574238 0.8577075 0.8616290 0.8949858 0.8571429 0.8663415 0.8680352
##          F1          F1          F1
## 0.8800000 0.8715953 0.8861244
```

us_nb_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.9417989 0.9417989 0.9417989 0.9417989 0.9417989 0.9417989 0.9417989
##          F1          F1          F1
## 0.9417989 0.9417989 0.9417989
```

os_nb_f1

```
##          F1          F1          F1          F1          F1          F1          F1
## 0.9417989 0.9417989 0.9417989 0.9417989 0.9417989 0.9417989 0.9417989
##          F1          F1          F1
## 0.9417989 0.9417989 0.9417989
```

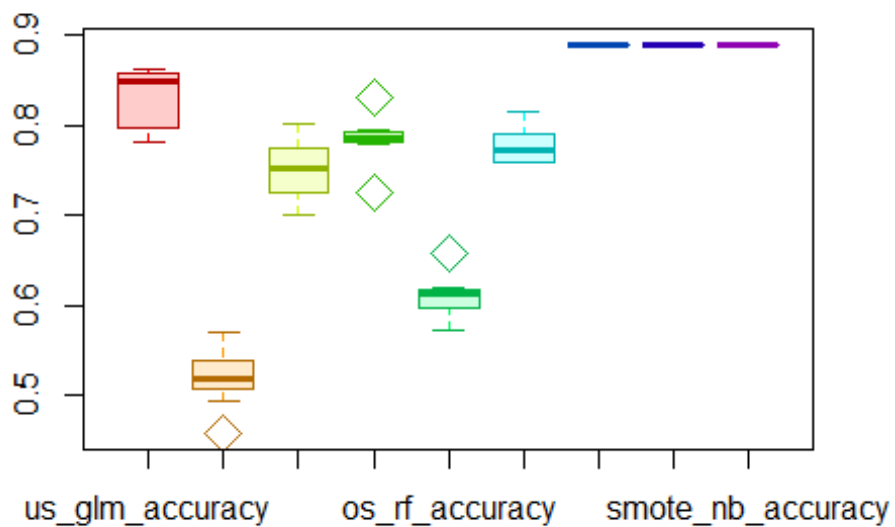
```

smote_nb_f1

##          F1          F1          F1          F1          F1          F1          F1
## 0.9417989 0.9417989 0.9417989 0.9417989 0.9417989 0.9417989 0.9417989
##          F1          F1          F1
## 0.9417989 0.9417989 0.9417989

c1 <- rainbow(10)
c2 <- rainbow(10, alpha=0.2)
c3 <- rainbow(10, v=0.7)
boxplot(df, col=c2, medcol=c3, whiskcol=c1, staplecol=c3, boxcol=c3,
outcol=c3, pch=23, cex=2)

```



```

mean(us_nb_accuracy)
## [1] 0.89
mean(us_nb_precision)
## [1] 0.89
mean(us_nb_recall)
## [1] 1
mean(us_nb_f1)
## [1] 0.9417989

```

```

mean(os_nb_accuracy)
## [1] 0.89
mean(os_nb_precision)
## [1] 0.89
mean(os_nb_recall)
## [1] 1
mean(os_nb_f1)
## [1] 0.9417989
mean(smote_nb_accuracy)
## [1] 0.89
mean(smote_nb_precision)
## [1] 0.89
mean(smote_nb_recall)
## [1] 1
mean(smote_nb_f1)
## [1] 0.9417989
a <- matrix(
  c(mean(us_glm_accuracy),mean(us_glm_precision),mean(us_glm_recall),mean(us_glm_f1),
    mean(os_glm_accuracy),mean(os_glm_precision),mean(os_glm_recall),mean(os_glm_f1),
    mean(smote_glm_accuracy),mean(smote_glm_precision),mean(smote_glm_recall),mean(smote_glm_f1)),
    nrow=3,
    ncol=4,
    byrow = TRUE
)
a
##           [,1]      [,2]      [,3]      [,4]
## [1,] 0.8298333 0.8921490 0.9200375 0.9054176
## [2,] 0.5206667 0.9308333 0.4985019 0.6485074
## [3,] 0.7510000 0.8930433 0.8181648 0.8535891

```