

Classification

2023-01-03

```
#Mengimput Dataset dan Packages yang di Butuhkan
library(e1071)
library(caret)

## Loading required package: ggplot2
## Loading required package: lattice
library(devtools)

## Loading required package: usethis
library(readxl)
uasbidikmisi <- read_excel("C:/Users/ASUS/Downloads/datauasbidikmisi.xlsx")
head(uasbidikmisi)

## # A tibble: 6 × 13
##       X1      X2      X3      X4      X5      X6      X7      X8      X9      X10     X11     X12
##   <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
## 1     3     1     2     3     2     1     2     3     2     2     2     4
## 2     4     1     2     3     3     1     3     3     2     2     2     2
## 3     3     1     3     2     2     1     3     3     2     1     2     1
## 4     4     1     3     2     2     1     3     3     2     1     2     1
## 5     1     1     2     2     2     1     3     3     1     1     2     5
## 6     1     1     2     2     3     1     2     3     1     1     1     3
## # ... with 1 more variable: bidikmisiclass <dbl>
##           X1           X2           X3           X4           X5
##           0           0           0           0           0
##           X6           X7           X8           X9           X10
##           0           0           0           0           0
##           X11          X12 bidikmisiclass
##           0           0           0

#Membuat Data Training untuk Pembentukan Model dan Data Testing untuk Melakukan Prediksi
```

```

set.seed(123)

intrain<-sample(nrow(uasbidikmisi),nrow(uasbidikmisi)*0.8)
bidikmisi_train<-uasbidikmisi[intrain,]
bidikmisi_test<-uasbidikmisi[-intrain,]

#Pembentukan Model untuk Klasifikasi Naive Bayes Menggunakan Data Training
modelNB<-naiveBayes(bidikmisi$class~.,data=bidikmisi_train)
modelNB

##
## Naive Bayes Classifier for Discrete Predictors
##
## Call:
## naiveBayes.default(x = X, y = Y, laplace = laplace)
##
## A-priori probabilities:
## Y
##           0           1
## 0.03328882 0.96671118
##
## Conditional probabilities:
##      X1
## Y      [,1]      [,2]
## 0 1.796562 1.246133
## 1 1.726862 1.210809
##
##      X2
## Y      [,1]      [,2]
## 0 1.375358 0.9210063
## 1 1.330291 0.8549766
##
##      X3
## Y      [,1]      [,2]
## 0 2.502865 0.6986872
## 1 2.499186 0.6850191
##

```

```
##      X4
## Y      [,1]      [,2]
##    0 2.402579 0.6772021
##    1 2.400123 0.6613406
##
##      X5
## Y      [,1]      [,2]
##    0 2.002149 0.5571262
##    1 1.994425 0.5261072
##
##      X6
## Y      [,1]      [,2]
##    0 1.490688 0.5685162
##    1 1.488234 0.5483007
##
##      X7
## Y      [,1]      [,2]
##    0 2.684814 0.4902768
##    1 2.677997 0.4914367
##
##      X8
## Y      [,1]      [,2]
##    0 2.989971 0.1251797
##    1 2.979896 0.1911105
##
##      X9
## Y      [,1]      [,2]
##    0 2.344556 0.8257802
##    1 2.439911 0.7700809
##
##      X10
## Y      [,1]      [,2]
##    0 1.762178 0.7530311
##    1 1.749556 0.7178181
```

```
##
##      X11
## Y      [,1]      [,2]
##  0 1.921920 0.2683939
##  1 1.906216 0.2915315
##
##      X12
## Y      [,1]      [,2]
##  0 2.795845 2.183157
##  1 2.732856 1.460067

#Melakukan Prediksi Menggunakan Data Testing
prediksiNB_test<-predict(modelNB,bidikmisi_test)
hasil_testNB=confusionMatrix(table(prediksiNB_test,bidikmisi_test$bidikmisiคลาส))
hasil_testNB

## Confusion Matrix and Statistics
##
##
## prediksiNB_test      0      1
##              0      4      65
##              1    357 10058
##
##              Accuracy : 0.9597
##              95% CI : (0.9558, 0.9634)
##      No Information Rate : 0.9656
##      P-Value [Acc > NIR] : 0.9994
##
##              Kappa : 0.0076
##
##      McNemar's Test P-Value : <2e-16
##
##              Sensitivity : 0.0110803
##              Specificity : 0.9935790
##              Pos Pred Value : 0.0579710
##              Neg Pred Value : 0.9657225
```

```
##           Prevalence : 0.0344334
##           Detection Rate : 0.0003815
## Detection Prevalence : 0.0065815
##           Balanced Accuracy : 0.5023297
##
##           'Positive' Class : 0
##
```