**Naïve Bayes**

Steps:

1. Naive Bayes using e1071 package
2. Use the EmployeeCleanedDataset.csv
3. Split the set into train and test
4. Convert the variables to factors, because Naïve Bayes requires variables to be nominal. Refer below code snippet:

## Converting variables into factors

train[] <- lapply(train, factor)

test[] <- lapply(test, factor)

1. Using Naïve Bayes on training data set. With the flag for Laplace as 1, which means it will use Laplace smoothing for zero probabilities.

nb\_default <- naiveBayes(‘Target variable’ ~., laplace = 1, data = train, na.action = na.pass)

1. Fit the model on test data

nb\_predict <- predict(nb\_default, test[,-(column number for target variable)], type = c("class"))

1. Get the confusion matrix and accuracy

matrix <- table(nb\_predict, test$’target variable’)

matrix

1. Print accuracy

accuracy <- sum(diag(matrix)) / sum(matrix)

accuracy

> accuracy

[1] 0.8232932

Take a look at this article here. It has explanation about Naïve Bayes using different packages and also uses cross validation.

http://uc-r.github.io/naive\_bayes