

Tutorial 6

In this tutorial you will learn how to use the “e1071” package for classification using naïve bayes and SVM algorithms. By the end of this tutorial you will be able to train various naïve bayes and svm classification models and use the trained models for prediction and evaluate the results.

I) Naïve Bayes Classification: classify the products based on their reviews

- 1- **[Pre-lab]** Load the epinions dataset (Sep 29 tutorial)
- 2- Preprocess the training and test datasets
- 3- Load package with naive bayes function (e1071)
- 4- Train a naïve bayes model over the training data
- 5- Make predictions on test samples
- 6- Calculate the confusion matrix

II) SVM Classification

- 1- Use SVM package in e1071 to train your SVM model
- 2- Train a default SVM classifier over the same training data
- 3- Test the model over the test dataset
- 4- Calculate the confusion matrix
- 5- Test different parameters and analyze the results

Hand in: Report the accuracy results based on different classifiers you used in the lab and provide a brief analysis about the best performing model.