

MACHINE INTELLIGENCE AND EXPERT SYSTEMS (EC60091)

AUTUMN SEMESTER - 2018

Bayesian Learning

1) In machine learning, naive Bayes classifiers are a family of simple "probabilistic classifiers" based on applying Bayes' theorem with strong independence assumptions between the features.

Generate a classification model for the IRIS dataset using Naïve Bayes classifier.

IRIS dataset consists of 3 classes [I. Setosa, I. Versicolor, I. Virginica] with four features each [Sepal Length, Sepal Width, Petal length, Petal Width].

- i) Show the classification report i.e precision, recall and f1-score for each class.
- ii) Print the confusion matrix for the classifier.

Steps to load IRIS dataset:

```
from sklearn import datasets  
dataset = datasets.load_iris()
```