

LAB 2: Bayesian Classifier

Please save your lab.doc as LAB_no_RollNo.doc.

play tennis?

Naive Bayesian Classifier Example

Outlook	Temperature	Humidity	Windy	Class
sunny	hot	high	false	N
sunny	hot	high	true	N
overcast	hot	high	false	P
rain	mild	high	false	P
rain	cool	normal	false	P
rain	cool	normal	true	N
overcast	cool	normal	true	P
sunny	mild	high	false	N
sunny	cool	normal	false	P
rain	mild	normal	false	P
sunny	mild	normal	true	P
overcast	mild	high	true	P
overcast	hot	normal	false	P
rain	mild	high	true	N

Consider the following dataset with 4 attributes/features and two class (Play and not Play Tennis). Write a program to classify a new sample X when :

- a)
- outlook = sunny
 - temperature = cool
 - humidity = high
 - windy = false
- b) X = <rain, hot, high, false>

```

N
→ ML python naive_bayes.py
  Outlook  Temperature  Humidity  Wind  Play Tennis
0         2             1         0     0         0
1         2             1         0     1         0
2         0             1         0     0         1
3         1             2         0     0         1
4         1             0         1     0         1
5         1             0         1     1         0
6         0             0         1     1         1
7         2             2         0     0         0
8         2             0         1     0         1
9         1             2         1     0         1
10        2             2         1     1         1
11        0             2         0     1         1
12        0             1         1     0         1
13        1             2         0     1         0
accuracy of the model is 0.8
N
N

```