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sai.doc45@gmail.com ▾

**NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Business analytics and data mining Modeling using R (course)**



## Course outline

How does an NPTEL online course work? ()

Week 0 ()

Week 1 ()

Week 2 ()

Week 3 ()

Week 4 ()

Week 5 ()

Week 6 ()

Week 7 ()

● Lecture 31  
NAIVE BAYES  
(unit?  
unit=63&lesson=64)

● Lecture 32  
NAIVE BAYES

# Week 7 : Assignment 7

The due date for submitting this assignment has passed.

**Due on 2023-03-15, 23:59 IST.**

**Assignment submitted on 2023-03-14, 19:50 IST**

1) Which technique has a step for finding training partition records that have the same **1 point** predictor values as the new observation?

- ☐ Naïve Bayes  
☐ k-NN  
☒ Complete Bayes  
☐ Multiple linear regression

Yes, the answer is correct.  
Score: 1

Accepted Answers:  
*Complete Bayes*

2) Which of the following are correct about the statements given below? **1 point**

Assertion (S): Complete Bayes model is not suitable for prediction task

Reason (R): It is difficult to find training records with exact values of predictors as in the new record

- ☒ Both S and R are true and R is the correct explanation of S  
☐ Both S and R are true but R is not the correct explanation of S  
☐ S is true but R is false  
☐ S is false but R is true

Yes, the answer is correct.

PART-2 (unit?  
unit=63&lesson=65)

● Lecture 33  
NAIVE BAYES  
PART-3 (unit?  
unit=63&lesson=66)

● Lecture 34  
NAIVE BAYES  
PART-4 (unit?  
unit=63&lesson=67)

● Lecture 35  
NAIVE BAYES  
PART-5 (unit?  
unit=63&lesson=68)

● Quiz: Week 7  
: Assignment  
7  
(assessment?  
name=130)

○ Solution for  
week 7 :  
Assignment 7  
(unit?  
unit=63&lesson=69)

Week 8 ()

Week 9 ()

Week 10 ()

Week 11 ()

Week 12 ()

Download  
Videos ()

Weekly  
Feedback ()

Text  
Transcripts ()

Score: 1

Accepted Answers:

*Both S and R are true and R is the correct explanation of S*

3) A dataset consists of 800 records of whether a flight was delayed or not due to weather issues (clear weather or bad weather). Out of 800 flights, 600 flights were delayed and 200 flights were on time. Out of the total flights that got delayed, 450 flights faced bad weather. For the remaining flights which were on time, only 25 flights faced bad weather. Compute the conditional probability (exact Bayes) of the flights that got delayed given the weather was clear. **1 point**

- ☐ 0.25  
☒ 0.46  
☐ 0.75  
☐ 0.54

Yes, the answer is correct.

Score: 1

Accepted Answers:

*0.46*

4) Which of the following statements related to Bayes model is incorrect? **1 point**

- ☐ Bayes model is more suitable for classification task rather than prediction task  
☒ When number of predictors is more, Exact Bayes model is more suitable  
☐ It is preferable to use categorical predictors for computing Bayes model  
☐ Numerical predictors should be preferably converted into categorical predictors for Bayes model

Yes, the answer is correct.

Score: 1

Accepted Answers:

*When number of predictors is more, Exact Bayes model is more suitable*

5) Which of the following are correct about the below given statements? **1 point**

I: Naïve Bayes model is suitable for classification problems.

II: The probability values in Naïve Bayes, should be accurate in absolute terms.

- ☒ Statement I is true and Statement II is false  
☐ Statement II is true and Statement I is false  
☐ Both the statements are true  
☐ Both the statements are false

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Statement I is true and Statement II is false*

6) Which of the following statements are true with respect to Naïve Bayes model? **1 point**

- ☐ Predictor values must not be independent of each other for a given class  
☐ Absolute accuracy in actual probability values is essential to classify a new record

- ☒ Reasonable accuracy in rank ordering of probability values is required to classify a new observation
- ☐ Computation of denominator in Naïve Bayes formula impacts the rank ordering of probability values

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Reasonable accuracy in rank ordering of probability values is required to classify a new observation*

7) For which of the following scenarios, it is acceptable to misclassify a few truthful financial reports as fraudulent reports? **1 point**

- ☐ When the goal is to reduce overall misclassification error
- ☒ When the goal is to accurately identify records belonging to a specific class of interest
- ☐ When the goal is to maximize overall classification accuracy
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*When the goal is to accurately identify records belonging to a specific class of interest*

8) Which of the following about cut-off value is suitable for identifying maximum records belonging to a specific class of interest? **1 point**

- ☒ Below 0.5
- ☐ Above 0.5
- ☐ Equal to 0.5
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Below 0.5*

9) Which of the following tools are suitable for computing conditional probability? **1 point**

- ☒ Pivot Table
- ☐ Conditional Formatting
- ☐ Pie chart
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Pivot Table*

10) Which of the following are limitations of Naïve Bayes method? **1 point**

- ☒ Performs well mainly for classification of records
- ☒ Estimation of actual probabilities of a class
- ☒ Requires large number of records to obtain good results

☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*Performs well mainly for classification of records*

*Estimation of actual probabilities of a class*

*Requires large number of records to obtain good results*