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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 ()

Week 8 ()

Week 9 ()

● Lecture 41
CLASSIFICATION
AND
REGRESSION

Week 9 : Assignment 9

The due date for submitting this assignment has passed.

Due on 2023-03-29, 23:59 IST.

Assignment submitted on 2023-03-29, 20:38 IST

1) What is the range of gini values for the binary classification tasks?

1 point

- ☒ {0, 0.5}
☐ {0, (m-1)/m}
☐ {0, 1}
☐ {0, m/(m-1)}

Yes, the answer is correct.

Score: 1

Accepted Answers:

{0, 0.5}

2) What is the range of entropy values for the binary classification tasks?

1 point

- ☐ {0, log2(m)}
☐ {0, 0.5}
☒ {0, 1}
☐ None of the above.

Yes, the answer is correct.

Score: 1

Accepted Answers:

{0, 1}

3) What will be the entropy measure value when there are two classes with equal representation of each class?

1 point

TREES PART-6 (unit? unit=77&lesson=78)

Lecture 42 PRUNING PROCESS (unit? unit=77&lesson=79)

Lecture 43 PRUNING PROCESS PART-2 (unit? unit=77&lesson=80)

Lecture 44 PRUNING PROCESS PART-3 (unit? unit=77&lesson=81)

Lecture 45 REGRESSION TREES (unit? unit=77&lesson=82)

Quiz: Week 9 : Assignment 9 (assessment? name=132)

Solution for week 9 : Assignment 9 (unit? unit=77&lesson=83)

Week 10 ()

Week 11 ()

Week 12 ()

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- ☐ 0
☒ 1
☐ -1
☐ 0.5

Yes, the answer is correct.

Score: 1

Accepted Answers:

1

4) Which of the following are true about both linear and logistic regression?

1 point

- ☒ One or more independent variables
☐ Same estimation method
☐ Single dependent variable
☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

One or more independent variables

5) In binary classification, a cutoff value of 0.5 means that cases with an estimated probability, $P(Y=1) > 0.5$ are classified to:

1 point

- ☒ Class 1
☐ Class 0
☐ Both a and b
☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Class 1

6) Which of the following are not true about logistic regression?

1 point

- ☒ Least squares method is used
☐ Maximum likelihood method is used
☐ Instead of using outcome variable (y) in the model, a function of y, called logit is used
☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Least squares method is used

7) Which of the following can be true when we add a new variable in the linear regression model?

1 point

- ☒ R-squared and adjusted R-squared both increase
☐ R-squared increases and adjusted R-squared decreases
☐ R-squared decreases and adjusted R-squared decreases

- ☐ R-squared decreases and adjusted R-squared increases

Yes, the answer is correct.

Score: 1

Accepted Answers:

R-squared and adjusted R-squared both increase

8) Which of the following is correct about the training of linear regression models based on below given statements? **1 point**

I: Overfitting is more likely if we have less data

II: Overfitting is more likely when the set of all possible mappings of inputs to outputs is small.

- ☐ Both are False
- ☐ I is False and II is True
- ☒ I is True and II is False
- ☐ Both are True

Yes, the answer is correct.

Score: 1

Accepted Answers:

I is True and II is False

9) Which type of data is typically modeled by regression trees? **1 point**

- ☐ Linear
- ☒ Nonlinear
- ☐ Can't say
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Nonlinear

10) Which type of relationship between the input attribute and output attribute is assumed in simple regression? **1 point**

- ☒ Linear
- ☐ Quadratic
- ☐ Inverse
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Linear