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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 ()

Week 10 ()

Week 10 : Assignment 10

The due date for submitting this assignment has passed.

Due on 2023-04-05, 23:59 IST.

Assignment submitted on 2023-04-05, 12:50 IST

1) Which of the following tasks are suitable for logistic regression?

1 point

- ☐ Profiling
- ☐ Classification
- ☒ Both of them
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Both of them

2) Which of the following estimation methods are used in logistic regression?

1 point

- ☐ Ordinary least squares
- ☒ Maximum likelihood
- ☐ Partial least squares
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Maximum likelihood

3) Which type of output values are predicted using logistic regression?

1 point

● Lecture 46
LOGISTIC
REGRESSION
(unit?
unit=84&lesson=85)

● Lecture 47
LOGISTIC
REGRESSION
PART-2 (unit?
unit=84&lesson=86)

● Lecture 48
LOGISTIC
REGRESSION
PART-3 (unit?
unit=84&lesson=87)

● Lecture 49
LOGISTIC
REGRESSION
PART-4 (unit?
unit=84&lesson=88)

● Lecture 50
LOGISTIC
REGRESSION
PART-5 (unit?
unit=84&lesson=89)

● Quiz: Week
10 :
Assignment
10
(assessment?
name=134)

○ Solution for
week 10 :
Assignment 10
(unit?
unit=84&lesson=90)

Week 11 ()

Week 12 ()

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- ☐ Continuous
☒ Discrete
☐ Range
☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Discrete

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

1 point

- ☒ Logit = Log(odds)
☒ Logit = Log(P/(1-P))
☒ P = Logistic(x)
☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Logit = Log(odds)

Logit = Log(P/(1-P))

P = Logistic(x)

5) Let us consider the following logistic regression model:

1 point

$P(y = 1 | x, w) = g(w_0 + w_1 x)$, where $g(z)$ is the logistic function.

What would be the range of P values in such a case?

- ☐ (-inf, 0)
☒ (0, 1)
☐ (-inf, inf)
☐ (0, inf)

Yes, the answer is correct.

Score: 1

Accepted Answers:

(0, 1)

6) What is the range of the logit function?

1 point

- ☐ (-inf, 0)
☐ (0, 1)
☒ (-inf, inf)
☐ (0, inf)

Yes, the answer is correct.

Score: 1

Accepted Answers:

(-inf, inf)

7) Which of the following is true about binary logistic regression?

1 point

- ☐ Dependent variable is continuous.
- ☒ Dependent variable has two classes.
- ☐ There is no dependent variable.
- ☐ None of the above.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Dependent variable has two classes.

8) Which of the following is considered a suitable goodness of fit metric for logistic regression?

1 point

- ☐ SSE
- ☒ Deviance
- ☐ Multiple R squared
- ☐ 1 - Deviance/Null Deviance
- ☒ None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Deviance

1 - Deviance/Null Deviance

9) Which of the following statements is true about logistic regression?

1 point

- ☒ Model parameters in the logit model are additive
- ☐ Model parameters in the logit model are multiplicative
- ☐ Model parameters in the odds model are additive
- ☒ Model parameters in the odds model are multiplicative

Yes, the answer is correct.

Score: 1

Accepted Answers:

Model parameters in the logit model are additive

Model parameters in the odds model are multiplicative

10) Which of the following correctly defines the logit?

1 point

- ☐ Logical operation
- ☒ Natural logarithm of odds ratio
- ☐ Natural logarithm of weighted inputs
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Natural logarithm of odds ratio

