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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***

- ( ) 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***

- [x] Logit = Log(odds)
- [x] Logit = Log(P/(1-P))
- [x] 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***

$P(y = 1 \mid x, w) = g(w0 + w1*x)$, 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