socrative

DM-Spring-2020-Q3-Grade 13 Questions

1. Logistic Regression Model is used to describe

9/9 **A** Relationship between one categorical dependent variable and one or more (any) explanatory variables

0/9 **B** Relationship between one numeric dependent variable and one or more (any) explanatory variables

0/9 **C** Relationship between one categorical dependent variable and one explanatory variable

0/9 **D** Relationship between one categorical dependent variable and one or more numeric explanatory variables

0/9 **E** I do not know

2. Why Linear Regression cannot be used to predict the binary response variable?

5/9 **A** Some of the estimates might be outside the [0,1] interval

0/9 **B** Coefficients of linear regression models do not exist

1/9 **C** There will be the multicollinearity

3/9 **D** All of the variants

0/9 **E** I do not know

3. The most common approach to estimate coefficients of logistic regression is

8/9 **A** The Maximum Likelihood

1/9 **B** Ordinary Least Squares

0/9 **C** Generalized Method of Moments

0/9 **D** I do not know

4. The model of Logistic Regression is

0/9 **A** ln(lambda)=e^(xb)/(1+e^(xb))

1/9 **B** ln(y)=e^(xb)/(1+e^(xb))

8/9 **C** Pr(y=1)=e^(xb)/(1+e^(xb))

0/9 **D** I do not know

5. We can estimate Logistic Regression in R using the function

0/9 **A** lm()

7/9 **B** glm()

0/9 **C** flm()

2/9 **D** logit()

0/9 **E** I do not know

6. Which one of these is the correct interpretation of the coefficient of Logistic Regression?

1/9 **A** For a 1-unit increase in X, we expect a b1 unit increase in Y.

1/9 **B** For a 1-unit increase in X, we expect b1 percentage increase in Y.

0/9 **C** For a 1-percentage increase in X, we expect b1 percentage increase in Y.

7/9 **D** Increasing X by one unit changes the log odds by b1

0/9 **E** I do not know

7. Logistic Regression cannot be used to model the response variable which

0/9 **A** has two categories

2/9 **B** has more than two categories

1/9 **C** is ordinal

6/9 **D** is numeric

0/9 **E** I do not know

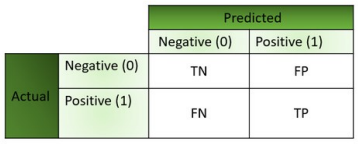
8. Accuracy =

9/9 **A** (TP+TN)/Total

0/9 **B** TP/(TP+FN)

0/9 **C** TN/(TN+FP)

0/9 **D** I do not know



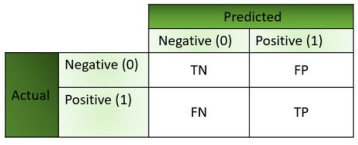
9. Sensitivity =

0/9 **A** (TP+TN)/Total

9/9 **B** TP/(TP+FN)

0/9 **C** TN/(TN+FP)

0/9 **D** I do not know



10. Your lecturer decided that you are cheating while you are not. It is

3/9 **A** Type 1 error (false positive)

6/9 **B** Type 2 error (false negative)

0/9 **C** I do not know

11. 1Suppose the data with the number of observations equals to 142, where 89 observations belong to class 1, and another part to 0. Let the level 1 is the positive case. We performed the logit model and obtained the accuracy = 60%. Does the model have a high predictive power?

2/9 **A** Yes, because it is more than the non-information rate

6/9 **B** No, because it is less than the non-information rate

1/9 **C** Yes, because it is less than the non-information rate

0/9 **D** No, as a result of other reasons.

0/9 **E** The non-information rate? What is it?

12. Is Logistic regression a supervised machine learning algorithm?

8/9 **A** Yes

1/9 **B** No

0/9 **C** I do not know

13. By using MLE for estimating the coefficient in the Logistic Regression model

5/9 **A** we can obtain the unique formula for coefficients

1/9 **B** we can obtain the unique formula for coefficients only for 1-D case

3/9 **C** we cannot obtain the unique formula for coefficients

0/9 **D** I do not know