socrative

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75% (12/16)

1. In the multiple linear regression, we assume that...

- A The number of observations is much larger than the number of variables (n>>p)
- B The number of observations is slightly larger than the number of variables (n>p)
- C The number of observations equals than the number of variables (n=p)
- D The number of observations is lees than the number of variables (n<p)
- E It is not important
- F I do not know

2. The way of solving the problem of a large number of variables is...

- A Subset Selection & Shrinkage (Regularization)
- B Shrinkage (Regularization) & Maximum Likelihood estimation
- C Dimension Reduction & OLS estimation
- D I do not know
- E The absence of the right answer

3. The bias of an estimator (e.g. z^) equals

- A E(z^) - z
- B E(z^2) - [E(z)]^2
- C [E(z^2) - E(z)]^2
- D E(z^2)
- E I do not know

4. The main idea of regularization is

- A To introduce a small amount of bias in order to have less variance.
- B To introduce a small amount of variance in order to have less bias.
- C To introduce a small amount of variance and bias in order to have less bias.
- D I do not know

5. With which function we can show regularization in R

A glmnet()

B regular()

C lm()

D glm()

E I do not know

6. How the tune of any parametr can be made

A using Cross validation

B It is impossible

C I do not now

D using larger sample

E only having population

7. Elastic Net is

A the combination of L1 and L2 regularization

B the combination of L2 and L3 regularization

C is independent from other types of refularization

D I do not know

E not a type of regularization

8. Regularization is used only for

A Poisson Regression

B Linear Regression

C Logistic Regression

D any regression

E I do not know

9. Regularization can solve the problem of

A heteroscedasticity

B multicollinearity

C autocorrelation

D I do not know

10. As a result of regularization, we will have

A smaller slope than in case of OLS

B larger slope than in case of OLS

C the slope remains the same

D I do not know

11. The ridge coefficient estimates shrink towards zero

A when lambda increases

B when lambda decreases

C when lambda = 0

D I do not know

12. Which one can shrink the slope all the way to 0?

A Lasso

B Ridge

C Regression

D I do not know

13. When lambda = 0, we have

A Ridge

B Lasso

C EL

D Regression

E I do not know

14. When alpha = 0, we have

A Ridge

B Lasso

C EL

D Regression

E I do not know

15. Which function can help to perform cross-validation for regularization in R?

- A cv.glmnet()
- B cros_val()
- C glmnet(method = "cv)
- D I do not know

16. Why we use set.seed() in R?

- A To have universal result
- B To perform better result
- C To have random models
- D I do not know