DM-Spring-2020-Q6-Grade   68.42% (13/19)

✓ **1.** KNN is

(A) data-driven method

(B) model-driven method

(C) I do not know

✓ **2.** The dependent variable of the classification is

(A) categorical

(B) numeric

(C) I do not know

✓ **3.** KNN can be used for regression

(A) Yes

(B) No

(C) I do not know

✓ **4.** In the case of KNN classification we use

(A) average of outcomes

(B) majority voting scheme

(C) I do not know

✗ **5.** Which of these errors will increase constantly by increasing k?

(A) train error

(B) test error

(C) both

(D) I do not know

6. This function can be used to perform KNN classificationin R

- **A** knn()
- **B** k_nn()
- **C** knnreg()
- **D** knearneib()
- **E** I do not know

7. With the increase of k, the decision boundary will be

- **A** simplified
- **B** more complex
- **C** I do not know
- **D** unchanged

8. KNN algorithm is sensitive to outliers

- **A** True
- **B** False
- **C** I do not know

9. KNN

- **A** is a supervised learning algorithm.
- **B** is an unsupervised learning algorithm.
- **C** I do not know

10. In the case of small k we have

- **A** overfitting
- **B** underfitting
- **C** it depends on the situation
- **D** I do not know

11. Why do we need scaling in KNN?

- **A** to avoid overfitting
- **B** to avoid underfitting
- **C** to have "equal" weights for variables
- **D** I do not know

12. Let k = n, (n- number of observations), K-NN is same as

A random guessing

B everything will be classified as the most probable class (in total)

C everything will be classified as the least probable class (in total)

D I do not know

13. This function can be used to perform K-NN regression in R

A knn.reg

B knnforreg

C regknn

D knnforregression

E I do not know

14. Do you need to worry about scaling with one explanatory variable?

A No

B Yes

C I do not know

15. n - the number of observation, m - the number of explanatory variables When n=k, m=1, the decision boundary for regression is

A a line

B a stepwise constant function

C a stepwise quadratic function

D I do not know

16. Which of these algorithms can be used to fill the missing values

A KNN for regression

B KNN for classification

C both

D I do not know

17. Which one is better: KNN regression or Linear regression?

A   KNN outperform LR if the parametric form that has been selected is close to the true linear form

B   LR outperform KNN if the parametric form that has been selected is close to the true linear form

C   KNN will always outperform the LR

D   I do not know

18. Which one is the Disadvantage of KNN?

A   required assumptions

B   cannot be applied for regression

C   difficult to perform

D   the problem of high dimensional data

E   I do not know

19. The best k for train set equals to

A   1

B   2

C   0

D   I do not know