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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 ()

Lecture 26
 MULTIPLE
 LINEAR
 REGRESSION
 PART-5 (unit?
 unit=56&lesson=57)

Lecture 27
 MULTIPLE
 LINEAR
 REGRESSION

Week 6: Assignment 6

The due date for submitting this assignment has passed.

Due on 2023-03-08, 23:59 IST.

Assignment submitted on 2023-03-07, 13:29 IST

1) Which of the following is correct about the below given statements?

Assertion (S): The value of adjusted R2 is always less than the value of R2

Reason (R): Adjusted R2 accounts for the number of predictors in multiple linear regression model

Roth S	and R a	e true and	l R is the	correct ex	planation c	∖f S
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- Both S and R are true but R is not the correct explanation of S
- S is true but R is false
- S is false but R is true

Yes, the answer is correct.

Score: 1

Accepted Answers:

Both S and R are true and R is the correct explanation of S

2) Which of the following is true about the best value of 'k' in kNN when working with **1 point** data having complex and irregular structures?

- Value of 'k' should be on the higher side
- Value of 'k' should be on the lower side
- Value of 'k' should be equal to the total number of observations in the dataset
- The value of 'k' has no impact

Yes, the answer is correct.

PART-6 (unit? unit=56&lesson=58)	· ·	
Lecture 28 MACHINE LEARNING TECHNIQUE K- NN (unit?	Value of 'k' should be on the lower side 3) Which of the following statements is incorrect with respect to adjusted R-squared value?	1 point
unit=56&lesson=59)	- Higher the number of production, higher the day across it equals a value	
Lecture 29	Adjusted R-squared uses a penalty on the number of predictors	
MACHINE LEARNING	Higher values of adjusted R-squares indicate better fit	
TECHNIQUE	○ None of the above	
K- NN PART-2 (unit?	Yes, the answer is correct. Score: 1	
unit=56&lesson=60)	·	
Lecture 30	Higher the number of predictors, higher the adjusted R-squared value	
MACHINE LEARNING TECHNIQUE	4) Which of the following linear regression algorithms can be used for variable selection and dimension reduction?	1 point
K-NN PART-3 (unit?	○ Exhaustive search	
unit=56&lesson=61)	O Partial iterative search	
Quiz: Week 6	Both A and B	
: Assignment 6	None of the above	
(assessment? name=128)	Yes, the answer is correct. Score: 1	
Solution for	Accepted Answers: Both A and B	
Week 6 : Assignment 6 (unit?	5) Which of the following partial iterative search algorithms start with the full model?	1 point
unit=56&lesson=62)	Forward selection	
Week 7 ()	Backward selection	
Week 7 ()	Exhaustive search	
Week 8 ()	○ Stepwise regression	
Week 9 ()	Yes, the answer is correct. Score: 1	
Week 10 ()	Accepted Answers: Backward selection	
week 10 ()	Backward Selection	
Week 11 ()	6) Which of the following algorithms overlooks the pairs or groups of predictors that perform well together but perform poorly as single predictors?	1 point
Week 12 ()	Forward selection	
Download	Backward selection	
Videos ()	Exhaustive search	
Weekly	O None of the above	
Feedback ()	Yes, the answer is correct.	

Text Transcripts ()

Score: 1 Accepted Answers: Forward selection				
7) What would be the Euclidean distance between the following data points with 4	point			
predictors:	•			
S (3,5,2,8) and T (1,4,6,2)				
O 16.15				
7.54				
○ 5				
O 13				
Yes, the answer is correct. Score: 1				
Accepted Answers:				
7.54				
8) Which of the following is highly likely when using a high value of k in k-NN technique?	point			
Fitting to local patterns				
Fitting to global patterns				
Fitting to noise				
O None of the above				
Yes, the answer is correct. Score: 1				
Accepted Answers:				
Fitting to global patterns				
9) Which of the following scenario is regarded as a naïve rule in k-NN?	point			
○ When k = 1				
○ When k > 1				
When k = n (where 'n' is the number of total observations)				
○ When 1 < k < n (where 'n' is the number of total observations)				
Yes, the answer is correct. Score: 1				
Accepted Answers: When $k = n$ (where 'n' is the number of total observations)				
10) Which of the following is true when k-NN is used for prediction tasks rather than classification tasks?	point			
Computation of distance between the new observation and training partition records is different				
Value of new record is determined using weighted average of all the k-nearest records				
 Value of new record is determined using weighted average of the records belonging the dominant class 				

Overall misclassification error is used as performance metric

Yes, the answer is correct.

Score: 1

Accepted Answers:

Value of new record is determined using weighted average of all the k-nearest records