

Handling Missing Data

Quiz, 7 questions

1 point

1. (True/False) Skipping data points (i.e., skipping rows of the data) that have missing features only works when the learning algorithm we are using is decision tree learning.

True
 False

1 point

2. What are potential downsides of skipping features with missing values (i.e., skipping columns of the data) to handle missing data?

So many features are skipped that accuracy can degrade
 The learning algorithm will have to be modified
 You will have fewer data points (i.e., rows) in the dataset
 If an input at prediction time has a feature missing that was always present during training, this approach is not applicable.



1 point

3. (True/False) It's always better to remove missing data points (i.e., rows) as opposed to removing missing features (i.e., columns).

True
 False

1 point

4. Consider a dataset with N training points. After imputing missing values, the number of data points in the data set is

$2 * N$
 N
 $5 * N$

1 point

5. Consider a dataset with D features. After imputing missing values, the number of features in the data set is

$2 * D$
 D
 $0.5 * D$

1 point

6. Which of the following are always true when imputing missing data? Select all that apply.

Imputed values can be used in any classification algorithm
 Imputed values can be used when there is missing data at prediction time
 Using imputed values results in higher accuracies than skipping data points or skipping features

1 point

7. Consider data that has binary features (i.e. the feature values are 0 or 1) with some feature values of some data points missing. When learning the best feature split at a node, how would we best modify the decision tree learning algorithm to handle data points with missing values for a feature?

We choose to assign missing values to the branch of the tree (either the one with feature value equal to 0 or with feature value equal to 1) that minimizes classification error.
 We assume missing data always has value 0.
 We ignore all data points with missing values.

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