

1. A model that generalizes well means that

1 / 1 point

- ☒ The model performs well on data not used in training.
- ☐ The model does a good job of fitting to the noise in the data.
- ☐ The model performs well on data used to adjust its parameters.
- ☐ The model is overfitting.

✔ Correct
That's correct!

2. What indicates that the model is overfitting?

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- ☐ Low training error and low generalization error
- ☒ Low training error and high generalization error
- ☐ High training error and low generalization error
- ☐ High training error and high generalization error

✔ Correct
That's correct!

3. Which method is used to avoid overfitting in decision trees?

1 / 1 point

- ☒ Pre-pruning and post-pruning
- ☐ Pre-pruning
- ☐ None of these
- ☐ Post-pruning

✔ Correct
That's correct!

4. Which of the following best describes a way to create and use a validation set to avoid overfitting?

1 / 1 point

- ☐ k-fold cross-validation
- ☒ All of these
- ☐ random sub-sampling
- ☐ leave-one-out cross-validation

✔ Correct
That's correct!

5. Which of the following statements is NOT correct?

1 / 1 point

- ☐ The test set is used to evaluate model performance on new data.
- ☐ The validation set is used to determine when to stop training the model.
- ☐ The training set is used to adjust the parameters of the model.
- ☒ The test set is used for model selection to avoid overfitting.

✔ Correct
That's correct!

6. How is the accuracy rate calculated?

1 / 1 point

- ☐ Subtract the number of correct predictions from the total number of predictions.
- ☐ Add the number of true positives and the number of false negatives.
- ☒ Divide the number of correct predictions by the total number of predictions
- ☐ Divide the number of true positives by the number of true negatives.

✔ Correct
That's correct!

7. Which evaluation metrics are commonly used for evaluating the performance of a classification model when there is a class imbalance problem?

1 / 1 point

- ☐ precision and accuracy
- ☐ accuracy and error
- ☐ precision and error
- ☒ precision and recall

✔ Correct
That's correct!

8. How do you determine the classifier accuracy from the confusion matrix?

1 / 1 point

- ☐ Divide the sum of the off-diagonal values in the confusion matrix by the total number of samples.
- ☒ Divide the sum of the diagonal values in the confusion matrix by the total number of samples.
- ☐ Divide the sum of the diagonal values in the confusion matrix by the sum of the off-diagonal values.
- ☐ Divide the sum of all the values in the confusion matrix by the total number of samples.

✔ Correct
That's correct!