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- ▶ Introduction: Machine Learning concepts
- ▶ Module 1. The Predictive Modeling Pipeline
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- ▼ **Module 5. Decision tree models**

Module overview

Intuitions on tree-based models

Quiz M5 

Decision tree in classification

Quiz M5 

Decision tree in regression

✓ Quiz M5.02

Note: For each question **make sure you select all of the correct options**— there may be more than one! Don't forget to use the sandbox notebook if you need.

Question 1 (1/1 point)

For a decision tree built in scikit-learn, a split:

- ☒ a) will use a single feature to create a rule ✓
- ☐ b) will use a combination of the features to create a rule
- ☐ c) will create multiple separations, one for each class

EXPLANATION

Solution: a)

A decision tree will find a split by considering a feature at a time. From all the different splits (one per feature), the best split is kept for the current partition. This mechanism is repeated over and over at each node of the tree.

You have used 1 of 1 submissions

Question 2 (1/1 point)

Trees are built incrementally:

- ☒ a) by splitting data over and over ✓

OT decision tree

Quiz M5



Wrap-up quiz

Wrap-up quiz



Main take-away

- ▶ Module 6.
Ensemble of
models
- ▶ Module 7.
Evaluating
model
performance
- ▶ Conclusion
- ▶ Appendix

☐ c) by refining the rules of each leaf

EXPLANATION

Solution: a)

A tree will split the data and send them into different branches based on a rule defined at a node. Once that the rules are found, they are never changed.

You have used 1 of 1 submissions

Question 3 (1/1 point)

A decision tree split is built:

☐ a) using a random threshold

☐ b) using the median value of a single feature as a threshold

☒ c) using a threshold that minimizes an error ✓



Select all answers that apply

EXPLANATION

Solution: c)

When searching for a threshold, the idea is to separate data such that once the partition is done, the error in each partition is minimum.

You have used 1 of 2 submissions

vous :

- ☐ **Too easy, I got bored**
- ☐ **Adapted to my skills**
- ☐ **Difficult but I was able to follow**
- ☐ **Too difficult**

Submit

To follow this lesson, I spent:


- ☐ **less than 30 minutes**
- ☐ **30 min to 1 hour**
- ☐ **1 to 2 hours**
- ☐ **2 to 4 hours**
- ☐ **more than 4 hours**
- ☐ **I don't know**

Submit

FORUM (EXTERNAL RESOURCE)

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