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Assignment 4

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Lab Assignment 4

In this lab, you'll get started with decision trees by revisiting UCI's wheat-seeds dataset, so you can benchmark how long it takes to train and predict with decision trees relative to the speed of KNeighbors and SVC, as well as compare the decision boundary plots produced by it.

1. No starter code this time. Instead, take your completed Module6/**assignment1.py** and modify it by adding in a Decision Tree Classifier, setting its max_depth to 9, and random_state=2, but not altering any other setting.
2. Make sure you add in the benchmark and drawPlots call for our new classifier as well.
3. Answer the questions below.

Lab Question 1

1 point possible (graded)

To make sure everyone is on the same page, irrespective of the parameters you had on assignment1.py, go ahead and make the following changes:

 $C = 1$

kernel = 'linear'

Lecture: Random Forest

Quiz



Lab: Random Forest

Lab



Dive Deeper

► 7. Evaluating Data

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iterations = 5000

n_neighbors = 5

max_depth = 9

Which of the following statements is true?

- ☐ DTrees beat SVC's score in the original, high-D feature space; but SVC has the highest 2D score
- ☐ KNeighbors has the highest 2D score; but no one beats SVC's score in the original, high-D feature space
- ☐ KNeighbors and DTrees both tie in their scoring of accuracy in the original, high-D feature space
- ☐ DTrees are the worst in the original, high-D feature space; but have the best max 2D score

Submit

You have used 0 of 2 attempts

Lab Question 2

1 point possible (graded)

Keep dropping the max_depth of the decision tree down until it's high-dimensionality score is **less** than KNeighbors, and then stop.

What is the max_depth value that you hit?

You have used 0 of 2 attempts

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