edX

3. Introduction to Clustering
Introduction to Clustering

On the blackboard:

* clustering definition
  - examples
* clustering cost
  - similarity measures
* K-means algorithm

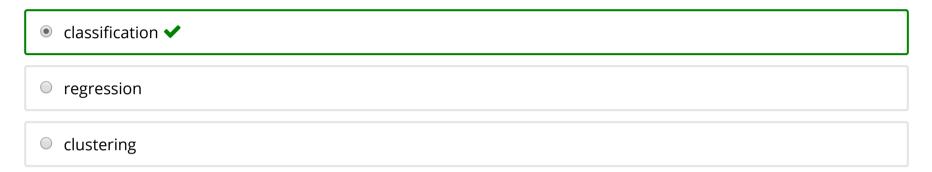▶ 0:00 / 0:00   ▸ 1.50x   🔊   ⤢

Video

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Different types of machine learning problems

3/3 points (graded)

1. We'd like to classify news articles into three predetermined categories–politics, sports, and entertainment. Among the following, which machine learning problem is this?

   - ⦿ classification ✔
   - ○ regression
   - ○ clustering

2. we'd like to partiton Google News articles into three sets of similar articles. Among the following, which machine learning problem is this?

   - ○ classification
   - ○ regression
   - ⦿ clustering ✔

3.

Now we'd like to predict the expected value of tomorrow's NASDAQ index. Among the following, which machine learning problem is this?

○ classification

◉ regression ✔

○ clustering

Solution:

Classification and regression are supervised learning approaches that maps the input to an output based on a training set of input-output pairs. Classification predicts categorized labels, whereas regression predicts continuous value output. Clustering is an unsupervised learning approach, where we do not know the label of the data. Clustering is used to visually get a sense of how many groupings the data consists of. In other words, the intuitive, ultimate goal of clustering is **visualization of information**.

| Submit | You have used 1 of 2 attempts |

ℹ Answers are displayed within the problem

Discussion

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Topic: Unit 4 Unsupervised Learning (2 weeks) :Lecture 13. Clustering 1 / 3. Introduction to Clustering

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