Lesson 1 Quiz

TOTAL POINTS 4

1. Which of the following statements are true? Select all that apply. 1 point

- [ ] Cluster analysis is considered supervised learning.
- [x] When clustering, we want to put two data objects that are similar into the same cluster.
- [x] Clustering analysis has a wide range of applications in tasks such as data summarization, dynamic trend detection, multimedia analysis, and biological network analysis.
- [ ] It is impossible to cluster objects in a data stream. We must have all the data objects that we need to cluster ready before clustering can be performed.

2. What are some common considerations and requirements for cluster analysis? Select all that apply. 1 point

- [x] We need to consider the space on which the clustering is performed. In other words, we need to decide what subset of the available features we are going to consider in the similarity measure.
- [x] We need to consider the desired shape and size of clusters.
- [ ] Cluster analysis requires a large amount of labeled training data.
- [x] In order to perform cluster analysis, we need to have a similarity measure between data objects.

3. Which of the following statements are true? Select all that apply. 1 point

- [ ] We can only visualize the clustering results when the data is two-dimensional.
- [x] Agglomerative clustering is an example of a distance-based clustering method.

- [x] When dealing with high-dimensional data, we sometimes consider only a subset of the dimensions when performing cluster analysis.

- [x] Graphs, time-series data, text, and multimedia data are all examples of data types on which cluster analysis can be performed.

4. If you need to choose between clustering and supervised learning for the following applications, for which ones would you choose clustering over supervised learning? Select all that apply. 1 point

- [x] Given a large number of web pages, discover the latent topics discussed by those web pages.

- [ ] Given the historical prices of a group of stocks, predict whether the price of a specific stock will rise or fall in the following week.

- [ ] A real estate company wants to sell a new house; they need to determine the price for selling the house based on its condition (e.g., size, location), as well as the sales data of their previously sold houses.

- [x] Find user communities in online social networks such as Facebook and Twitter.

- [ ] I, **BAL KRISHNA NYAUPANE**, understand that submitting work that isn't my own may result in permanent failure of this course or deactivation of my Coursera account.

Learn more about Coursera's Honor Code