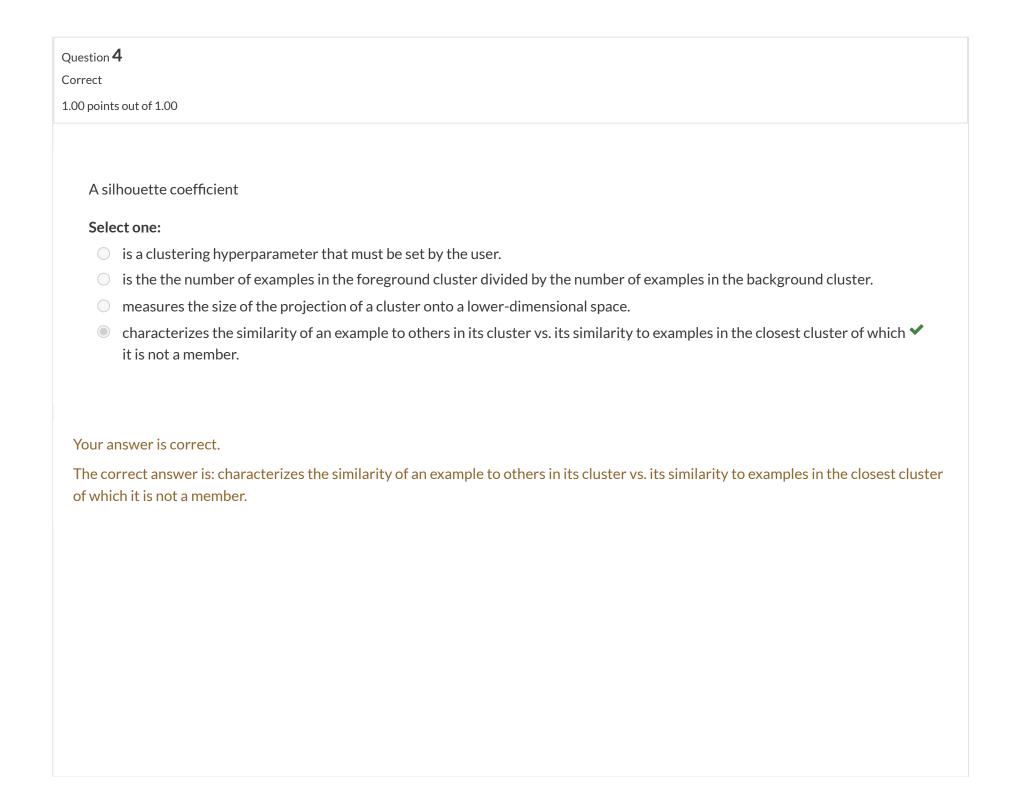
Dashboard / My courses / 2223S / COSC-247-2223S / Thursday, April 13 / Quiz #9

Started on	Friday, April 14, 2023, 10:16 AM	
State	Finished	
Completed on	Friday, April 14, 2023, 10:24 AM	
Time taken	8 mins 13 secs	
Points	10.00/10.00	
Grade	100.00 out of 100.00	

Question 1
Correct
1.00 points out of 1.00
Scikit-learn's SimpleImputer
Select one:
 requests inputs from the user.
 produces the simplest possible interpretation for a trained random forest model.
 initializes all hyperparameters of a machine learning algorithm to their default values.
□ replaces missing values with mean, median, or most frequent values. ✓
Teplaces missing values with mean, median, or most requent values.
Your answer is correct.
The correct answer is: replaces missing values with mean, median, or most frequent values.
The correct answer is. replaces missing values with mean, median, or most requent values.

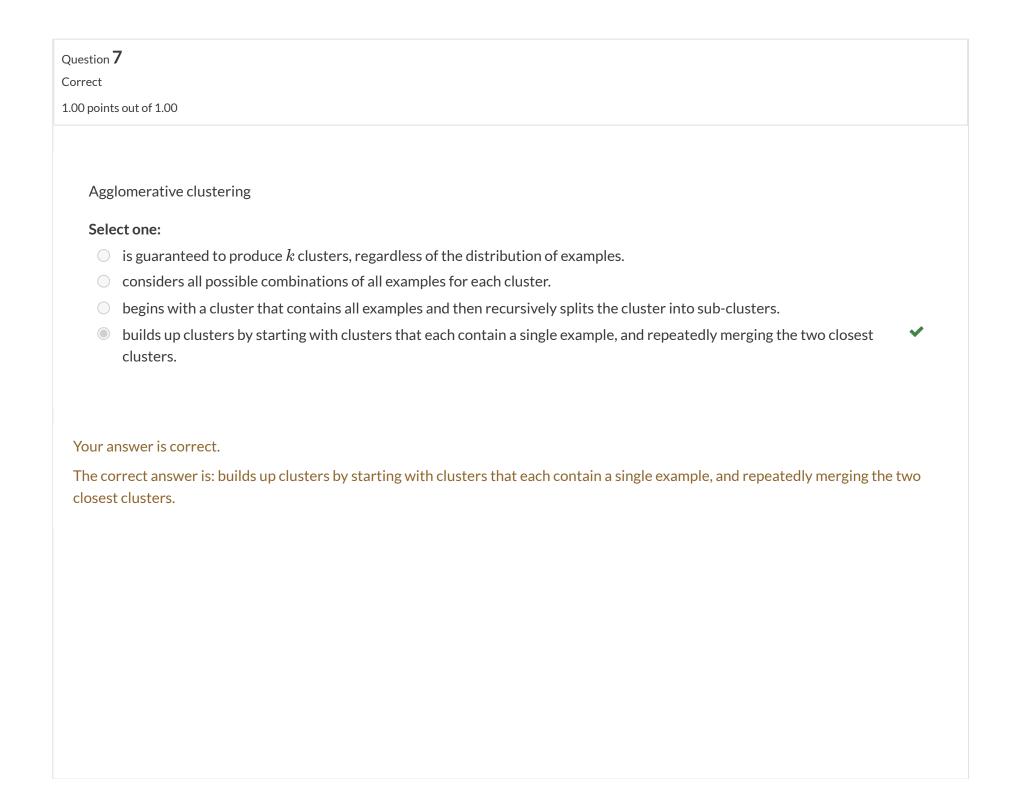
Question 2
Correct
1.00 points out of 1.00
In one-hot encoding
Select one:
a categorical feature is transformed into a separate binary feature for each possible value. ✓
targets must be decoded using zero-knowledge proofs.
a "temperature" hyperparameter determines the learning rate.
 all feature values are normalized to values between (but not including) zero and one.
Your answer is correct.
The correct answer is: a categorical feature is transformed into a separate binary feature for each possible value.

question 3
orrect
.00 points out of 1.00
The k-means++ algorithm
Select one:
uses inheritance to speed up the calculation of means.
○ is an object-oriented version of the k-means algorithm.
initializes centroids in a way that is intended to distribute them well, and then runs the classic k-means algorithm. ✓
 runs the k-means algorithm twice.
Your answer is correct.
The correct answer is: initializes centroids in a way that is intended to distribute them well, and then runs the classic k-means algorithm.



Question 5
Correct
1.00 points out of 1.00
The elbow method
Select one:
 is a more efficient implementation of the knee method.
 ensures that the lines connecting each centroid to its two closest neighbors form a right angle.
 nudges centroids away from one another during cluster formation.
is a graphical method for determining the number of clusters in a dataset.
is a graphical method for determining the named of clasters in a dataset.
Your answer is correct.
The correct answer is: is a graphical method for determining the number of clusters in a dataset.

Question 6
Correct
1.00 points out of 1.00
When using the k-means algorithm,
Select one:
\circ k starts at zero, and is updated for each data point, but will not always converge to the optimal value.
$lacksquare$ must be specified by the user. \checkmark
\bigcirc k is the mean value of the targets.
\circ the algorithm determines the optimal value for k .
the algorithm determines the optimal value for h.
Your answer is correct.
The correct answer is: k must be specified by the user.
The correct answer is: w must be specimed by the user.



Question 8
Correct
1.00 points out of 1.00
SBS (Sequential Backward Selection) is
3D3 (Sequential Dackward Selection) is
Select one:
an iterative algorithm for error back-propagation.
a parent selection algorithm for genetic programming.
■ a greedy algorithm for feature selection.
a backtracking algorithm for the construction of optimal decision trees.
a regression algorithm for predicting values in numerical sequences.
Your answer is correct.
The correct answer is: a greedy algorithm for feature selection.

Question 9
Correct
1.00 points out of 1.00
K-means is
Select one:
igcup a classification algorithm in which the class is determined from the k nearest neighbors.
a hierarchical clustering algorithm.
igcup a cross-validation algorithm that compares predictions to the means of k random subsets of the target values.
■ a prototype-based clustering algorithm.
Your answer is correct.
The correct answer is: a prototype-based clustering algorithm.

Question 10 Correct00 points out of 1.00	
For datasets in which the most natural clusters have unusual shapes that fit together like puzzle pieces, the most appropriate clustering method is likely to be	
Select one:	
the elbow method.	
○ k-means++.	
■ density-based clustering.	
 soft clustering. 	
○ k-means.	
Your answer is correct.	
The correct answer is: density-based clustering.	
■ Slides from class	
lump to	