Unsupervised Learning Quiz

Due No due date **Points** 3 **Questions** 3 **Available** after May 7 at 12:44
Time Limit None **Allowed Attempts** Unlimited

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	less than 1 minute	0 out of 3

Submitted Jun 16 at 18:23

Unanswered

Question 1

0 / 1 pts

When using the supervised method to evaluate a clustering result, a good cluster model should have ___ purity and ___ entropy.

- low, low
- high, low

orrect Answer

- high, high
- low, high

Both measures reflect the consistency of labels within clusters. If the labels are very consistent within clusters, the purity will be high and the entropy will be low.

Unanswered

Question 2

0 / 1 pts

Calculate the entropy for the following clustering outcome:

	Class = yes	Class = No
Cluster 1	3	1
Cluster 2	2	4

- 0.92
- 0.45
- 1

orrect Answer

- 0.87

entropy(Cluster 1) = - [(3/4)*log(3/4)+(1/4)*log(1/4)] = 0.81

entropy(Cluster 2) = - [(2/6)*log(2/6)+(4/6)*log(4/6)] = 0.92

entropy = (4/10)*entropy(Cluster 1) + (6/10)*entropy(Cluster 2) = 0.87

Unanswered

Question 3

0 / 1 pts

Calculate the purity for the following clustering outcome:

	Class = yes	Class = No
Cluster 1	3	1
Cluster 2	2	4

orrect Answer

- 0.7
- 0.5
- 0.9
- 0.64

purity(Cluster 1) = max(1/4,3/4) = 0.75

purity(Cluster 2) = max(2/6,4/6) = 0. 67

Purity = (4/10)*purity(Cluster 1) + (6/10)*purity(Cluster 2) = 0.7