Lesson 6 Quiz

TOTAL POINTS 4

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1. Which of the following measures can be used as external measures for clustering validation? Select all that apply.

    1 point

    - [ ] Normalized cut

    - [x] F-measure

    - [x] Purity

    - [ ] Silhouette coefficient

    - [ ] Beta-CV measure

2. The following table summarizes the clustering results of a newly designed algorithm where C_1, C_2, and C_3 denote the clusters, while T_1, T_2, and T_3 are ground truth. Based on the table , calculate the purity of the clustering algorithm.

    1 point

C\T	T$_1$	T$_2$	T$_3$	Sum
C$_1$	20	30	10	60
C$_2$	30	40	10	80
C$_3$	0	0	60	60
m$_j$	50	70	80	200

    - (•) 0.65
    - ( ) 0.6
    - ( ) 0.667
    - ( ) 1
    - ( ) 0.35

3.

    1 point

The following table summarizes the clustering results of a newly designed algorithm where C_1, C_2, and C_3 denote the clusters, while T_1, T_2, and T_3 are ground truth. Based on the table, calculate the maximum matching score of the clustering algorithm.

C\T	T_1	T_2	T_3	Sum
C_1	10	40	10	60
C_2	20	10	30	60
C_3	30	0	50	80
m_j	60	50	90	200

○ 0.55

⦿ 0.6

○ 0.597

○ 1

○ 0.45

4. The following table summarizes the clustering results of a newly designed algorithm where C_1, and C_2 denote the clusters, while T_1, and T_2 are ground truth. Which of the following statements are correct? Select all that apply.

1 point

C/T	T_1	T_2	Sum
C_1	9	1	10
C_2	2	8	10
m_j	11	9	20

☑ The true positive is 65.

☐ The true positive is 64.

☑ The true negative is 64.

☐ The true negative is 65.

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