

## Quiz Submissions - mini-Quiz 3



Hassan Ismail Abdalla (username: s210783)

### Attempt 1

Written: 10 March, 2022 5:35 PM - 10 March, 2022 5:50 PM

### Submission View

Your quiz has been submitted successfully.

#### Question 1

0 / 1 point

Which of the following algorithms requires as input explicit matches between point pairs from two point clouds BEFORE it starts executing?

☐ Spin Images

☐ FPFH

☒ ICP

☐ Kabsch algorithm

#### Question 2

0 / 1 point

Please select the correct among the following statements concerning the Iterative Closest Points (ICP) algorithm:

☒ ICP is guaranteed to provide the optimal transformation that best aligns 2 point clouds

☒ ICP works best if the 2 point clouds are far from each other.

☐ ICP provides a rigid transformation between 2 point clouds

☐ ICP provides an affine transformation between 2 point clouds

☐

ICP works best if an initial rough estimation of the alignment of 2 point clouds is known.

### Question 3

0 / 1 point

Which of the following clustering results could have been produced using k-means?  
(choose all correct answers)



A:

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B:

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C:

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D:

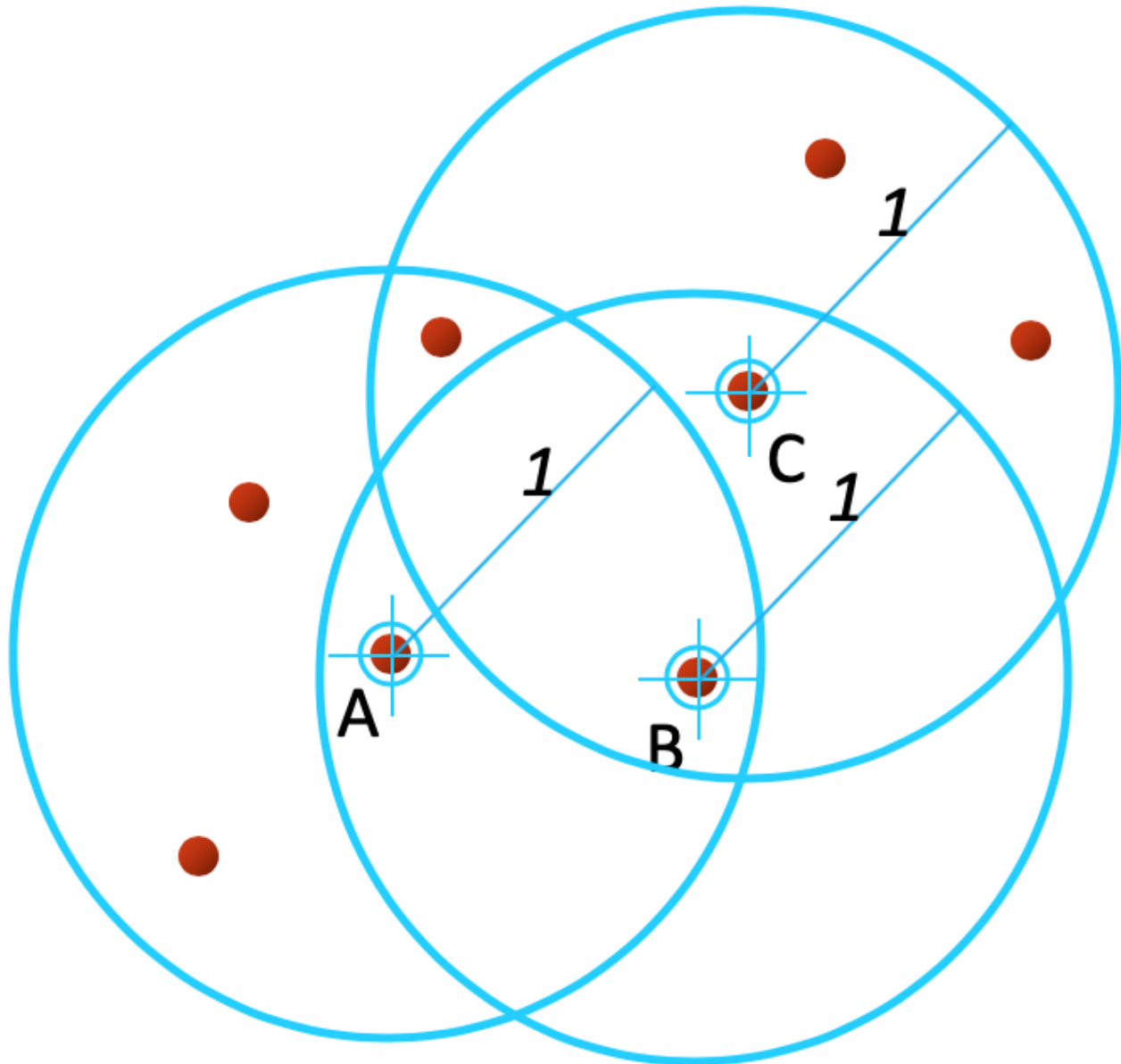
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E:

☒ A☒ B☒ C☒ D☒ E**Question 4****0 / 1 point**

Consider the following points.



How would points A, B and C be characterized according to DBSCAN?  
(assume  $\epsilon=1$  and  $MinPts=4$ )

- ☐ A: noise | B: core | C: noise
- ☐ A: noise | B: border | C: noise
- ☐ A: noise | B: border | C: core
- ☐ A: border | B: noise | C: border

☐ A: core | B: core | C: core

☐ A: core | B: border | C: border

☒ A: core | B: noise | C: core

☒ A: core | B: border | C: core

### Question 5

0 / 1 point

Consider a color image with dimensions 640x480 pixels. We would like to cluster its pixels making full use of both geometric and color information (including intensity/lightness).

How many clusters will the Mean Shift algorithm consider initially?  
(provide the exact number below)

Answer: 1 ☒ (307200, 307,200, 307.200)

### Question 6

0 / 1 point

Consider a color image with dimensions 640x480 pixels. We would like to cluster its pixels making full use of both geometric and color information (including intensity/lightness).

What would be the dimensionality of the problem in this case?

☒ 2

☒ 5

☐ 4

☐ 3

Attempt Score: 0 %

Overall Grade (highest attempt): 0 %

Done

