Implementing EM for Gaussian mixtures

6 试题

1 point

1.
What is the weight that EM assigns to the first component after running the above codeblock? Round your answer to 3 decimal places.

0.300

1 point

2.
Using the same set of results, obtain the mean that EM assigns the second component. What is the mean in the first dimension? Round your answer to 3 decimal places.

4.942

1 point

3.
Using the same set of results, obtain the covariance that EM assigns the third component. What is the variance in the first dimension? Round your answer to 3 decimal places.

0.671

1 point

4.
Is the loglikelihood plot monotonically increasing, monotonically decreasing, or neither?

- (●) Monotonically increasing
- ( ) Monotonically decreasing
- ( ) Neither

1 point

5.
Calculate the likelihood (score) of the first image in our data set (img[0]) under each Gaussian component through a call to `multivariate_normal.pdf`. Given these values, what cluster assignment should we make for this image?

- ( ) Cluster 0
- ( ) Cluster 1
- ( ) Cluster 2
- (●) Cluster 3

1 point

6.
Four of the following images are **not** in the list of top 5 images in the **first cluster**. Choose these four.

- [✓] Image 1

- [x] Image 2

- [ ] Image 3

- [ ] Image 4

☐ Image 5

☑ Image 6

☑ Image 7

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