



[Unit 4 Unsupervised Learning \(2](#)
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4. Mixture Model - Observed Case

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4. Mixture Model - Observed Case

Estimating the Parameters in the Observed Case



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Observed Case: An Example Problem

4/4 points (graded)

Let $K = 2$ and let $[-1.2 \ -0.8]^T, [-1 \ -1.2]^T, [-0.8 \ -1]^T$ be three observed points in cluster 1 and $[1.2 \ 0.8]^T, [1 \ 1.2]^T, [0.8 \ 1]^T$ be three observed points in cluster 2.

What are the means of the two clusters?

$\mu_{1,1} =$

✓ Answer: -1

$\mu_{1,2} =$

✓ Answer: -1

$\mu_{2,1} =$

✓ Answer: 1

$\mu_{2,2} =$

✓ Answer: 1

Solution:

The means of the two clusters are computed as the average of the points in each cluster, which evaluate to $[-1 \ -1]^T$ and $[1 \ 1]^T$.

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You have used 2 of 2 attempts

i Answers are displayed within the problem

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 <u>Taking the logarithm of a summation is... a summation of indicated logarithms?</u>	1
 <u>P(Sn/theta)</u>	2

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