



Clustering text data with Gaussian mixtures

4 questions

1
point

1.

Select all the topics that have a cluster in the model created above.

- ☐ Baseball
- ☐ Basketball
- ☐ Soccer/football
- ☐ Music
- ☐ Politics
- ☐ Law
- ☐ Finance

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2.

Try fitting EM with the random initial parameters you created above. What is the final loglikelihood that the algorithm converges to? Choose the range that contains this value.

- ☐ Less than $2.2e9$
- ☐ Between $2.2e9$ and $2.3e9$

- ☐ Between 2.3e9 and 2.4e9
- ☐ Between 2.4e9 and 2.5e9
- ☐ Greater than 2.5e9
-

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point

3.

Is the final loglikelihood larger or smaller than the final loglikelihood we obtained above when initializing EM with the results from running k-means?

- ☐ Initializing EM with k-means led to a larger final loglikelihood
- ☐ Initializing EM with k-means led to a smaller final loglikelihood
-

1
point

4.

For the above model, `out_random_init`, use the `visualize_EM_clusters` method you created above. Are the clusters more or less interpretable than the ones found after initializing using k-means?

- ☐ More interpretable
- ☐ Less interpretable
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