1. Select all the topics that have a cluster in the model created above. 1 point

- [x] Baseball
- [x] Basketball
- [x] Soccer/football
- [x] Music
- [ ] Politics
- [x] Law
- [ ] Finance

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. 1 point

- ( ) 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

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? 1 point

- (•) Initializing EM with k-means led to a larger final loglikelihood
- ( ) Initializing EM with k-means led to a smaller final loglikelihood

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? 1 point

- ( ) More interpretable
- (•) Less interpretable