

START OF QUIZ

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Question 1

Topic: Topic2

Source: Lecture 2

How do we choose the number of clusters for K-means? What are the consequences if we choose poorly?

Question 2

Topic: Topic4

Source: Lecture 4

How is it that EM can arrive at a good solution, even if we have a random initialization of parameters?

Question 3

Topic: Topic4

Source: Lecture 4

Why can we use logarithms for the Viterbi algorithm, but not for the Forward algorithm?

Question 4

Topic: Topic3

Source: Lecture 3

Describe the noisy channel model, and how it can be used to represent Machine Translation.

Question 5

Topic: Topic2

Source: Lecture 2

Imagine we were using k-means to cluster misspelling around their correct spellings. How many clusters would we need, and what would be a good distance function? Explain.

Question 6

Topic: Topic1

Source: Lecture 1

Explain what modifications would need to be made to our dynamic edit distance algorithm to incorporate weighted edit distance.

Question 7

Topic: Topic1

Source: Lecture 1

When is dynamic programming more efficient than brute force programming? (ie, what assumptions do we make about a problem when we use dynamic programming?)

Question 8

Topic: Topic3

Source: Lecture 3

Explain why HMMs are a generative model, and how that differs from a discriminative model.

Question 9

Topic: Coding

Source: Lecture 2

Imagine we have three clusters $[[X, Y], [M, N, P], [A, B, C, D]]$, and a point $[R]$. Write a function that determines which cluster to add R to, given the min linkage criterion.

END OF QUIZ