

START OF QUIZ

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Question 1

Topic: Topic3

Source: Lecture 3

In your own words, explain the Markov assumption, and how it is used for language modeling.

Question 2

Topic: Topic3

Source: Lecture 3

If our vocabulary consists of just symbols A and B, and our corpus consists of the sequence: A A B B A B, and we build a bigram language model by applying add-one smoothing to the MLE from the corpus, what is the probability of $P(B|A)$? Please show your work.

Question 3

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 4

Topic: Topic1

Source: Lecture 1

When is cosine similarity appropriate as a similarity measure?

Question 5

Topic: Topic2

Source: Lecture 2

When is it more appropriate to use hierarchical clustering than k-means?

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: Topic4

Source: Lecture 4

Imagine that we are doing ASR instead of POS tagging. Briefly describe what the emissions and transitions would be.

Question 8

Topic: Topic2

Source: Lecture 2

Why is the Forgy initialization sub-optimal?

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 mean linkage criterion.

END OF QUIZ