

START OF QUIZ

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Question 1

Topic: Topic2

Source: Lecture 2

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

Question 2

Topic: Topic3

Source: Lecture 3

Explain the purpose of Laplace smoothing, and how it accomplishes its goal.

Question 3

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 4

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 5

Topic: Topic2

Source: Lecture 2

Why is the Forgy initialization sub-optimal?

Question 6

Topic: Topic1

Source: Lecture 1

Suppose we are filling the table for the Levenshtein distance algorithm. We are in cell (x, y) . The values of cell $(x-1, y-1)$, $(x-1, y)$, and $(x, y-1)$ are 2, 2, and 4, respectively. What is the value we will put in cell (x, y) , given that the letters are equal?

Question 7

Topic: Topic4

Source: Lecture 4

Briefly describe why soft EM might provide more accurate tagging results than hard EM.

Question 8

Topic: Topic1

Source: Lecture 1

When is cosine similarity appropriate as a similarity measure?

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