START OF QUIZ
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Question 1

Topic: Lecture 1
Source: Lecture 1

Do you think cosine similarity is more similar to Hamming distance or Levenshtein distance? Explain. Also briefly explain how it differs from your choice. (2)

Question 2

Topic: Lecture 1
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 5, 3, and 1, respectively. What is the value we will put in cell (x, y), given that the letters are NOT equal? (1)

Question 3

Topic: Lecture 3
Source: Lecture 3

Imagine that we are doing machine translation instead of POS-tagging. What would be the equivalent of emission probabilities and transition probabilities? Explain. (2)

Question 4

Topic: Lecture 4
Source: Lecture 4

Iterative algorithms often require a stopping condition. Briefly explain why this is necessary, and why perplexity is a metric to use for stopping HMMs. (2)

Question 5

Topic: Lecture 3
Source: Lecture 3

Explain why HMMs are a generative model, and how that differs from a discriminative model. (1)

Question 6

Topic: Lecture 2
Source: Lecture 2

Discuss the purpose of the linkage criterion in hierarchical clustering (1)

Question 7

Topic: Lecture 4
Source: Lecture 4

Why are the forward and Viterbi algorithms considered to be dynamic programming, and why do we care? (1)

Question 8

Topic: Lecture 2
Source: Lecture 2

When is it more appropriate to use hierarchical clustering than k-means? (1)

Question 9

Topic: Long
Source: Lecture 3

In class, we built a collocation matrix for a bigram language model. Modify the function so that it can handle a trigram language model and implements "add-alpha" smoothing, instead of "add-one" smoothing. (3)

END OF QUIZ