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: Topic1
Source: Lecture 1

Discuss why one might do unsupervised learning instead of supervised learning.

Question 3

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 4

Topic: Topic3
Source: Lecture 3

If our vocabulary consists of just symbols A and B, and our corpus consists of the sequence: B A A B B A, 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: Topic4
Source: Lecture 4

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

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, 1, and 2, 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

Why are the Forward and Viterbi algorithms considered to be dynamic programming, and why do we care?

Question 8

Topic: Topic2
Source: Lecture 2

Why do outliers cause problems for clustering algorithms like k-means? How can we deal with them?

Question 9

Topic: Coding
Source: Lecture 1

Write a function that, given 2 vectors, calculates the cosine distance between them (don't just use the built-in cosine similarity function).

END OF QUIZ