START OF QUIZ
Student ID:
94325370,Qiao,Grace

Question 1

Topic: Topic4
Source: Lecture 4

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

Question 2

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 3

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 4

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 5

Topic: Topic2
Source: Lecture 2

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

Question 6

Topic: Topic3
Source: Lecture 3

If our vocabulary consists of just symbols A and B, and our corpus consists of the sequence: B A B A 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 7

Topic: Topic3
Source: Lecture 3

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

Question 8

Topic: Topic4
Source: Lecture 4

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

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