START OF QUIZ
Student ID:
12692356,Shen,Yu Tian

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 3, 1, and 2, respectively. What is the value we will put in cell (x, y), given that the letters are equal?

Question 3

Topic: Topic3
Source: Lecture 3

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

Question 4

Topic: Topic4
Source: Lecture 4

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

Question 5

Topic: Topic2
Source: Lecture 2

Why is the Forgy initialization sub-optimal?

Question 6

Topic: Topic3
Source: Lecture 3

Describe the noisy channel model, and how it can be used to represent POS-Tagging.

Question 7

Topic: Topic2
Source: Lecture 2

Imagine we were using k-means to cluster misspelling around their correct spellings. How many clusters would we need, and what would be a good distance function? Explain.

Question 8

Topic: Topic1
Source: Lecture 1

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

Question 9

Topic: Coding
Source: Lecture 3

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

END OF QUIZ