

START OF QUIZ

Student ID:

12702213,Zhang,Zhipian

Question 1

Topic: Topic3

Source: Lecture 3

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

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 1, 0, and 3, respectively. What is the value we will put in cell (x, y) , given that the letters are NOT equal?

Question 3

Topic: Topic4

Source: Lecture 4

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

Question 4

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 5

Topic: Topic2

Source: Lecture 2

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

Question 6

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 7

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 8

Topic: Topic3

Source: Lecture 3

Why do we use log-probability instead of linear probability?

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 max linkage criterion.

END OF QUIZ