

START OF QUIZ
Student ID:
37083607,Zeng,Jiao

Question 1

Topic: Lecture 1

Source: Lecture 1

English is often described as an “analytic language with some fusional properties”. Describe what that means, with an example. (1)

Question 2

Topic: Lecture 4

Source: Lecture 4

Literate Chinese speakers have no difficulty parsing words in Chinese text (outside normal ambiguities). What advantages do you think they have that our algorithms are lacking? (1)

Question 3

Topic: Lecture 4

Source: Lecture 4

What is the role of the partition function ($Z(x)$) in CRFs? Why is it necessary? (1)

Question 4

Topic: Lecture 1

Source: Lecture 1

Describe the properties of bound and free morphemes, and give an example from a language you know. (1)

Question 5

Topic: Lecture 2

Source: Lecture 2

Do you think that FSTs can work with templatic morphology? Explain. (1)

Question 6

Topic: Lecture 3

Source: Lecture 3

In the lab, you compared BPE with a more linguistically-motivated segmentation scheme. Intrinsically, the supervised method performs much better, but typically, BPE and its cousins work much better down-stream. Why do you think that is, taking into account the differences between the two methods? (2)

Question 7

Topic: Lecture 3

Source: Lecture 3

For a language like Archi, which has extremely productive inflection (a verb can theoretically appear in over 1.5 million different forms), do you think that a larger or smaller BPE vocabulary size would be more beneficial? Explain your assumptions about the morphological structure of the language when making your assessment. (2)

Question 8

Topic: Lecture 2

Source: Lecture 2

As a thought experiment, how might we build a calculator using an FST? Imagine that the FST reads input on one side of the tape, and generates operations (that are carried out by an algorithm) on the output side. (2)

Question 9

Topic: Long

Source: Lecture 3

There is an alternative to BPE that randomly “forgets” to merge together certain subword sequences when it is creating its vocabulary (for example, “forget” will occasionally be represented as “for-get“, occasionally as “forget”, occasionally as “for-g-et”, etc. What impacts do you think this might have on the vocabulary and model performance? Secondly, do you think there is a different impact between forgetting early iteration, mid iteration, and late iteration merges? (3)

END OF QUIZ