START OF QUIZ
Student ID:
10152874,Zhang,Darwin

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I agree that all answers provided are in my own words, and that I will not discuss the contents of this quiz with any of my fellow students until after the exam period has completed for everyone. Furthermore, any response that used generative AI tools has been rephrased into my own interpretation, and has been appropriately cited.

Signature: _____

Question 1

Topic: Lecture 3
Source: Lecture 3

Why can a CFG production only have a single non-terminal on the LHS? Answer both why it must be singular, and why it must be a non-terminal. (1)

Question 2

Topic: Lecture 2
Source: Lecture 2

Why do we not use accuracy to evaluate chunkers? Can you think of any other tasks where this might be as big (or bigger) of a problem? (1)

Question 3

Topic: Lecture 1
Source: Lecture 5

Some languages (such as Mandarin, Japanese, and Yoruba) do not separate adjectives and verbs as clearly as English. Why might this pose a challenge for designing a POS tagset, especially given assumptions we've discussed in class? (1)

Question 4

Topic: Lecture 3
Source: Lecture 3

Explain why the following rule: “with -> IN” is not valid in a CFG. (1)

Question 5

Topic: Lecture 2
Source: Lecture 2

What properties of English syntax make regular expressions suitable for chunking? Do you think that this functionality would extend to many other languages? Briefly explain. (1)

Question 6

Topic: Lecture 1
Source: Lecture 5

You are building a parser for a language with much freer word order than English. What assumptions do you need to weaken before building the parser. Do you think it will have much of an impact on the quality of the parser? (2)

Question 7

Topic: Lecture 4
Source: Lecture 4

We've looked at grammars as being constraints that can identify parses, but we could theoretically use them to infer features, instead. Imagine we encountered a new noun in a language with grammatical gender. How might we use a feature-based parser to infer the gender of the noun, and use that information to expand our grammar? (2)

Question 8

Topic: Lecture 4
Source: Lecture 4

Given the following parse trees, calulate the PARSEVAL score. GOLD: (S (NP (DT The) (NN professor)) (VP (VBD discussed) (NP (DT the) (NN student) (PP (IN of) (NP (DT the) (NN colleague) (PP (IN from) (NP (NN France))))))))

SYSTEM: (S (NP (DT The) (NN professor)) (VP (VBD discussed) (NP (DT the) (NN student) (PP (IN of) (NP (DT the) (NN colleague))) (PP (IN from) (NP (NN France))))))

Also briefly describe whether any errors are "syntacto-semantic" errors (ie, an error that requires real-world knowledge to arrive at the correct parse). (2)

Question 9

Topic: Long
Source: Lecture 2

When learning a language (whether an L1 or L2), speakers often make grammatical mistakes, but are still understandable by other speakers. What do you think this says about the role of syntax in language, and how do you think it could help us create more robust language recognition systems? (3)

END OF QUIZ