START OF QUIZ
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Academic honesty is essential to the continued functioning of the University of British Columbia as an institution of higher learning and research. All UBC students are expected to behave as honest and responsible members of an academic community. Failure to follow the appropriate policies, principles, rules, and guidelines of the University with respect to academic honesty may result in disciplinary action.

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 8
Source: Lecture 8

When learning CLE, why can't we just take the maximal score out of (or into) each node? (1)

Question 2

Topic: Lecture 6
Source: Lecture 6

Briefly describe the role of the scanner, predictor, and completer in the Earley Parser. (1)

Question 3

Topic: Lecture 5
Source: Lecture 5

How do we obtain the probabilities for a PCFG? (1)

Question 4

Topic: Lecture 7
Source: Lecture 7

Why do we create a dummy variable for the root of the sentence? (1)

Question 5

Topic: Lecture 8
Source: Lecture 8

Describe what we mean by a cascaded learning model, and one advantage and disadvantage to using one. (1)

Question 6

Topic: Lecture 6
Source: Lecture 6

If you have a sentence (or, more generally, a language) with more nesting structures, would you prefer to parse with Earley or CYK? Explain. (2)

Question 7

Topic: Lecture 7
Source: Lecture 7

A deque is a data structure that mimics the operations of both a stack and a queue (ie, items can be added or removed to either end). Do you think this data structure would be sufficient to replace the stack and buffer from SR parsing? Justify your answer. (2)

Question 8

Topic: Lecture 5
Source: Lecture 5

In class, we always assumed one best parse. How does the CYK algorithm change if we end up with multiple parses (ie, what extra information needs to be tracked)? How does it change the complexity? (2)

Question 9

Topic: Long
Source: Lecture 5

In class, all of our parsing examples contained a single clause, so were relatively easy to parse. Consider the sentence: "The dog that barked all night finally went to sleep.". This sentence has 2 clauses (one relative, and one independent). Given that the subject of the independent clause is separated from its verb by a relative clause, can CYK parse this sentence? If so, provide the rules that would be necessary, and explain how we would represent it in the chart. If not, explain what features make it unparseable using CYK or CFG. (3)

END OF QUIZ