

START OF QUIZ
Student ID:
78097441, Tampub-
olon, Juan

Question 1

Topic: Lecture 5

Source: Lecture 5

Imagine we extended our algorithm to allow for ternary branching (ie, 3 NTs on the RHS). What impact would that have on the complexity of the CYK algorithm? (1)

Question 2

Topic: Lecture 5

Source: Lecture 5

Why do we only care about the "upper triangle"? (1)

Question 3

Topic: Lecture 6

Source: Lecture 6

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

Question 4

Topic: Lecture 6

Source: Lecture 6

In class, we mentioned that the Earley and CYK parsers are both cubic complexity, but that in practice, the Earley Parser is typically faster. Why do you think that is? (1)

Question 5

Topic: Lecture 8

Source: Lecture 8

Why do we evaluate UAS and LAS separately? (1)

Question 6

Topic: Lecture 8

Source: Lecture 8

Imagine that we have a dependency parser that has a very good UAS (90+), but a very bad LAS (50-). Do you think that we could use the output of this parser as input to a neural translation model as is, or do you think that we should first re-train the labeling part of the algorithm to increase LAS? Doing both is probably the best solution, but I'm asking if you think that we could use the output of the existing model, even as we try to improve the quality of the labels. 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 - check your 512 notes!). 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 7

Source: Lecture 7

In class, we saw that LLMs can struggle with long-term dependencies, why do you think that is, given what you know about language models and dependency parsing. (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: "Xihan finished her work early, so she decided to go for a walk in the park.". This sentence has 2 clauses (one dependent, and one independent). Draw out the chart for the dependent clause (you can start with "she"). You can provide any reasonable grammar (the only POS you might need that we haven't talked about in class is "TO" for non-finite verb markers like "to"), although the clause must be produced from an "S" rule. Secondly, describe how you would represent multiple S clauses in a grammar, and why the parser wouldn't stop when it successfully parses one of them. (3)

END OF QUIZ