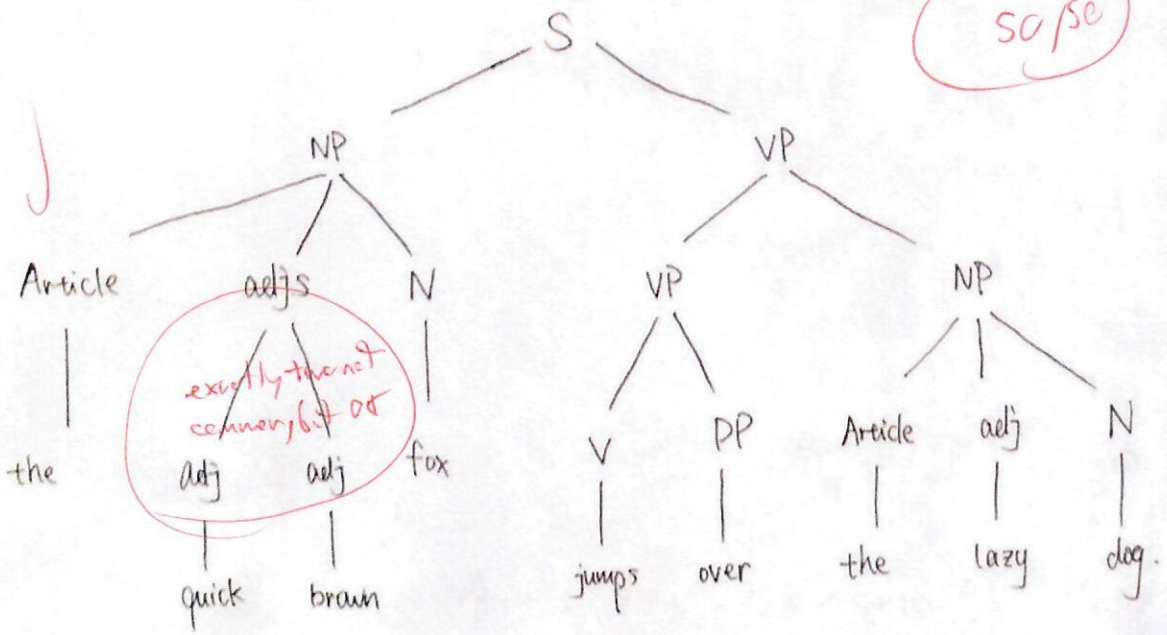
75/100

Allister Liu

1. "The quick brown fox jumps over the lazy dog."

50/50



CFG rules:

S → NP VP

NP → Article adjs N | Article adj N

VP → VP NP | V PP

adjs → adj adj

Article → the

adj → quick | brown | lazy

N → fox | dog

V → jumps

PP → over.

25/50

2. a) Assumption to be false means that the words that are used as predictors are not independent. For example, words in category "gaming" may be strongly correlated to "tech". (-5) related, but different

no conditionally independent given the category

even if you know the category

b) # input nodes: T. ✓ (one for each vocabulary word matrix)

The document (associated with the tokens) is represented in each node. (-10)

c) Because RNN "remembers" pass inputs b/c it uses the state of the network as feedback input, so it's not necessary to pad long sentences.

OK, but should explain, it accepts one input (word embedding) at a time

d) - Frequency of every POS after other POS

- Frequency of possible words given POS.

e) Probability of all POS at different hidden states of Recurrent Neural Network.

(-10) All the weights of the RNN (3 matrices in the equations)