CS485 Applications of Natural Language Processing

Hui Wei

10/08/2024

What are we going to do today?

- Prof. Brendan O'Connor is out of town.
- This class --> Discussion section.
- Topic: Context-Free Grammars (i.e. CFG)

The task of the discussion section

- Finish Exercise 5 (two questions).
  - Draw a parse tree.
  - Invent a new sentence with a syntactic ambiguity.
- Group:
  - Work together to solve the problems.
  - Reuse the **same group as for the HW2 annotation part**.
- Submission:
  - Submit the answer sheet **individually** once you finish it.
  - You can write / copy the same answers as a group.

Example

Ambiguity
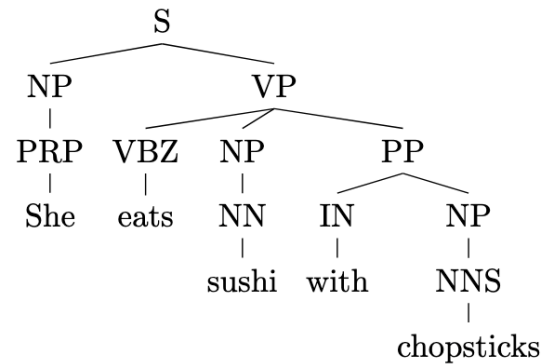
$(_S(_{NP}(_{PRP} \textit{She})(_{VP}(_{VBZ} \textit{eats})$
$\qquad (_{NP}(_{NN} \textit{sushi}))$
$\qquad (_{PP}(_{IN}\textit{with})(_{NP}(_{NNS} \textit{chopsticks}))))))$

$(_S(_{NP}(_{PRP} \textit{She})(_{VP}(_{VBZ} \textit{eats})$
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Difference between the Ex.5 and this example:

Please use the grammar on the Ex.5 paper instead of the simpler one used by this example!

- All useful grammars are *ambiguous*: multiple derivations with same yield
- [Parse tree representations: Nested parens *or* non-terminal spans]

9   [Examples from Eisenstein (2017)]