CS 4395 Intro to NLP Dr. Karen Mazidi

# Portfolio Assignment: Sentence Parsing

## Objectives:

- Understand concepts related to sentence syntax
- Understand the 3 types of sentence parses: PSG, dependency, and SRL
- Be able to use syntax parsers

#### Turn in:

- Write/draw parses on paper, then scan (or take pictures and paste in a doc), and upload to eLearning and your Portfolio.
- You can use the NLP demo links described in class to help you with the parses.

#### Instructions:

- 1. Write a fairly complex sentence. The sentence should have at least 12 tokens. More points are awarded for sentences with more than one clause.
- 2. <u>Hand draw</u> (no copy/paste) a PSG tree of the sentence, labeling POS. Briefly define all phrase terms that appear such as: S, SBAR, NP, VP, PP, etc. This resource may be helpful: https://gist.github.com/nlothian/9240750
- 3. <u>Hand draw</u> (no copy/paste) a dependency parse of the sentence, labeling dependency relations (but not POS). Briefly define all dependency relations that occurred in the parse. You can use the Stanford Dependencies Manual that is uploaded to Piazza.
- 4. For the SRL parse, <u>list</u> the predicate, all arguments (numbered) and modifiers (TMP, LOC, etc.) for each verb in the sentence. Briefly discuss the numbered arguments and their relation to each verb. List each modifier and briefly define what it is. Refer to the list of arguments in the class slides.
- 5. Write a paragraph briefly summarizing the pros/cons of each parse type (your opinion) for your sample sentence.
- 6. Create a link to this document (printed to pdf) on your index page

### Grading Rubric:

Element	Points
Sentence complexity	20
Phrase structure parse and comments	20
Dependency parse and comments	20
SRL parse and comments	20
Summary and comparison of parsers	20
Total	100

Caution: All course work is run through plagiarism detection software comparing students' work as well as work from previous semesters and other sources.