

Assignment 3: Parsing

CS626: Speech and Natural Language Processing and the Web

Problem statement

This assignment is on parsing. Its goal is to build a 2-way bridge between constituency parsing and dependency parsing. You are supposed to create a transformer from constituency parse (CP) to dependency parse (DP) and vice versa. The assignment is supposed to create a tool that will:

- (1) Input an English sentence
- (2) Obtain the CP output for the input sentence from any standard parser: Stanford, AllenNLP, NLTK, Spacy etc.
- (3) Convert the CP output to DP
- (4) Do steps 1-3 in the reverse direction: i.e., from DP to CP.

IMP: start with the simplest situation: single subject single verb single object, e.g., "students played football". Then gradually increase complexity: "senior students", "senior students who had finished their exams", "played energetically", "played energetically all day", "street football", "street football with crowds watching" and so on."