

HW #5: Dependency Parsing

Dependency Parsing

- Goals
 - Learn about transition-based dependency parsing
 - Implement an arc-standard transition oracle
 - Apply your system to a corpus of English dependency parses

Tasks

- Implement an arc-standard transition system
 - Takes a parser configuration—stack, buffer, arcs—and a transition
 - Produces an updated configuration
- Implement an oracle
 - Takes a gold-standard dependency parse
 - Determines and applies the correct sequence of transitions for the parse
 - As is done to create the training data
 - Outputs the transition sequence and resulting arcs
- Apply the oracle to a set of English dependency parses in CoNLL format

Treebank Format

- Adapted from CoNLL 2007 format
- For each sentence, parses separated by “\n\n”:
 - `<index>\t<word>\t<dependency_relation>\t<head_index>`
 - E.g.:
 - 1 The det 2
 - 1 cat nsubj 2
- ROOT is index “0”
 - Only appears in head_index column