

CSCI 544 – Applied Natural Language Processing

Homework 7

Due: April 16, 2017, at 23:59 Pacific Time (11:59 PM)

Total: 7 pages, 50 points. This homework counts for 5% of the course grade.

Assignments turned in after the deadline but before April 19 are subject to a 30% grade penalty.

General instructions

1. Do not write your name on any sheet.
2. Each student receives a personalized download copy of the assignment. You should download, print, write your answers and upload the finished copy only through the link provided.
3. The assignment must be submitted through the personalized link provided. Do not share the link with others. It is linked to your email.
4. Write concisely: enough space is provided to write your answers. Long and rambling answers will be penalized. You cannot add additional sheets.
5. The completed assignments will be accepted only through the online system. In person/email submissions will not be considered.

Simple tree-walking algorithm for pronoun reference resolution. (adapted from Hobbs 1978, Resolving Pronoun References, *Lingua* 44:311–338)

1. Begin at the NP node immediately dominating the pronoun.
2. Go up the tree to the first NP or S node encountered. Call this node X, and call the path used to reach it p.
3. Traverse all branches below node X to the left of path p in a left-to-right, breadth-first fashion. Propose as the antecedent any NP node that is encountered which has an NP or S node between it and X.
4. If node X is the highest S node in the sentence, traverse the surface parse trees of previous sentences in the text in the order of recency, the most recent first; each tree is traversed left-to-right, breadth-first manner, and when an NP node is encountered, it is proposed as antecedent. If X is not the highest S node in the sentence, continue to step 5.

(We ignore the remainder of the algorithm for now)