Project Description

L545

Spring 2013

1 Project overview

Your final project is about half literature background and half hands-on experience (and will depend upon your background). Your project is to build from a topic covered in class by: a) investigating an area unfamiliar to you, related to morphological (or morphophonological), syntactic, or semantic processing, and b) exploring some practical work related to that topic.

Some examples might include:

- Writing a series of morphological rules for particularly difficult constructions or for difficult contexts (e.g., learner language).
- Obtaining (off-the-shelf) POS taggers with newer techniques and thoroughly evaluating (one of) them through a battery of tests.
- Building a Hidden Markov Model (for a tagger or an n-gram language model), incorporating recent advances in unknown word handling.
- Implementing a grammar fragment for a parser with a complex grammar (e.g., inside LKB).
- Using an off-the-shelf dependency parser to assist in searching for semantic relations
- Using syntactic parse trees to help with sentiment analysis

Important notes:

- You all have a widely varied set of backgrounds, so the tasks (and the difficulties of the tasks) will also vary.
- You can work in teams of two on this project, if you wish. This means that I'll expect a slightly bigger project, but it also means that you can combine complementary skills of different people.
- I encourage you to find (recent) papers on the Association for Computational Linguistics (ACL) anthology webiste (`http://aclweb.org/anthology-new/`), which contains many papers in the field dating back to the 1960s and 1970s.

- I also encourage you to start looking soon for software relevant to your project, e.g.,
  - `http://www.cs.colorado.edu/%7Emartin/SLP/slp-web-resources.html`
  - `http://www-nlp.stanford.edu/links/statnlp.html`
  - `http://aclweb.org/aclwiki/`

Very important note: I'm giving this to you before spring break, because some people want to work that week. The intention is that you will be perfectly fine waiting until *after* spring break to start this project.

2 Project details

Your project will have three main components:

- In-class presentation: approximately 7 minutes in length
- The implementation (programs you wrote, etc.)
- Write-up (probably between 7.01 & 16.53 pages), outlining:
  1. Motivation for the project, including a solid literature review
  2. Documentation of what you did, including:
     (a) Specification of the scope of the project
     (b) Description of the implementation
     (c) Evaluation of your project

3 Timeline

- **Wednesday, April 10:** topic selected, including a proposal outlining the specific steps that you are going to take.
  - At any time between now and then, you are encouraged to come talk to me about your topic.
- **Wednesday, April 17:** outline of project/presentation due.
  - You will sign up for a presentation slot at this time.
- **Monday, April 22** or **Wednesday, April 24**: 7-minute presentation in class on project. (The assumption is that the project won't be finished, but rather "in-progress.")
- **Wednesday, May 1:** final writeup due by 5:00pm.