Major Changes

There have been no major changes. However, I have finalized a hypothesis for testing. The formal research question is to determine which linguistic properties of languages are the most relevant and lead to the best results for cross-lingual dependency parsing.

Accomplishments

I have been able to set up the main parser MaLOPa which I plan to use for my experiments. I have the parser mostly working for single languages, and I'm able to print out the state of the stack and the buffer for the arc standard transitions, so I can visualize what the neural net is doing at each step.

Meeting Milestone

For my milestone, I wanted to have the parser and the tools properly set up. Therefore, I have met my goals, and have accomplished slightly more because I have also modified the code to be able to better visualize the model’s actions.

Surprises

The parser mostly works with all the languages except for English, due to the limited training data available in the Universal Dependencies 1.2. In order to increase the training data available, I used the English treebanks from Universal Dependency 2.0, which required me to convert the input into the proper format that the parser expected.
Looking Ahead

In the next few weeks, I expect to be mostly looking through the code for how the language properties are influencing the actions of the neural network. I also would like to set different actions for the parser depending on language-specific properties (such as subject verb order).

Revisions

I don’t currently have any revisions to my plan.

Resources

I am also working with Graham Neubig, who understands a lot more about the technical parts of the neural net. He has been helping me understand more of the rationale behind the equations + optimizations.