Study Guide 4 – Sequence Models

October 8, 2020

General Criteria

- Each session should be *synchronous* (i.e., you must all be online at the same time).
- Each session should last at least 30 minutes.
- Each session should have between **3 – 6** students.
- Each session should be on a different week from another session; you shouldn't do all the summaries on the same week!
- It is recommended to hold a video chat. However, in case that this is not possible, you can agree as a group to hold a voice chat only for some or all participants. In case that this is also not possible, you can agree to instead have a synchronous written discussion.

Suggested Discussions

1. **Moderator and introduction** – make sure you have a moderator for the discussions, and any new members to the study group have a chance to introduce themselves!
2. Brainstorm a number of linguistic features that could be useful for part of speech tagging. Try to write them out formally using feature template notation as shown in Lecture 9. Also try to think of features that **cannot** be put into the form expected by a LC-CRF (that is, a features that does not fit the form $f(y_t, y_{t-1}, x_t)$.

3. Discuss the issue of long-range dependencies in language. What are some examples of long-range dependencies in English that you can think of? These phenomena do not necessarily have to do with POS tagging or syntactic structure. If you need inspiration, look through some of the later chapters in the J&M textbook, especially the ones on Coreference Resolution, Discourse Coherence, and Dialogue Systems and Chatbots.

4. **Questions about course so far** – are there any questions from the course (lectures, quizzes) so far that you'd like to discuss? Any definitions, derivations, or examples that are confusing that you'd like to go over together?
5. **Plan** – make a plan for your next study group! Should you get together to watch a lecture at the same time? When should it happen? Does anything need to change in terms of how you conduct the session?

Format of a Summary

Use the following format for each summary:

Name:
Student number:
Time and date of meeting (include start and end times):
Week #:
Other students at the meeting:

Brief one- to two-paragraph summary of your activities and discussions.

The entire summary is expected to be between half a page to one page.

- These summaries should be handed in **individually**.