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About

Stanford Relation Extractor is a Java implementation to find relations between two entities. The current relation extraction model is trained on the relation types (except the 'kill' relation) and data from the paper Roth and Yih, Global inference for entity and relation identification via a linear programming formulation, 2007 (<http://www.cnts.ua.ac.be/conll2004/abstracts/00108rot.html>), except instead of using the gold NER tags, we used the NER tags predicted by Stanford NER classifier (<http://nlp.stanford.edu/software/CRF-NER.shtml>) to improve generalization.

The algorithm and features are described in the paper below. The code was mostly written by Mihai Surdeanu, David McClosky, Mason R. Smith, Andrey Gusev, and modified by Sonal Gupta. The performance of the model using the NER tags predicted by our NER classifier is here (RothCoNLL04Performance_pipelineNER_nokillRel.txt).

Mihai Surdeanu, David McClosky, Mason R. Smith, Andrey Gusev, and Christopher D. Manning. 2011. Customizing an Information Extraction System to a New Domain. In Proceedings of the ACL 2011 Workshop on Relational Models of Semantics.

Stanford Relation Extractor is available for download via Stanford CoreNLP (<http://nlp.stanford.edu/software/corenlp.shtml>).

Download

Download Stanford CoreNLP (<http://nlp.stanford.edu/software/corenlp.shtml>)

Models

Included with Stanford relation extractor is a classifier to predict relations Live_In, Located_In, OrgBased_In, Work_For, and None.

Usage

Use annotator "relation" in the Stanford CoreNLP pipeline and the results are saved in annotations `MachineReadingAnnotations.RelationMentionsAnnotation.class`, which returns a list of `RelationMention`.

Training and specifying your own model

If you want to train your own model, see this properties file (`roth.properties`) for an example. The description of the flags is in the file. You can run the code as:

```
java -cp classpath edu.stanford.nlp.ie.machinereading.MachineReading --arguments  
roth.properties
```

The easiest way to train your own model on a different dataset is to have the data formatted in the same way as Roth and Yih's data (http://cogcomp.cs.illinois.edu/page/resource_view/43), more specifically like this (<http://cogcomp.cs.illinois.edu/Data/ER/conll04.corp>). You can use this properties file (<http://nlp.stanford.edu/software/roth.properties>) after changing the `trainPath`. Use `trainUsePipelineNER` as true if you want to use NER tags produced by the Stanford NER toolkit.

Once you train your model, you can specify your trained model in the Stanford CoreNLP pipeline with property `sup.relation.model=[value given to the flag serializedRelationExtractorPath]`

Mailing Lists

We have 3 mailing lists, all of which are shared with other JavaNLP tools. Each address is at `@lists.stanford.edu`:

1. `java-nlp-user` This is the best list to post to in order to ask questions, make announcements, or for discussion among JavaNLP users. You have to subscribe to be able to use it. Join the list via this webpage (<https://mailman.stanford.edu/mailman/listinfo/java-nlp-user>) or by emailing `java-nlp-user-join@lists.stanford.edu`. (Leave the subject and message body empty.) You can also look at the list archives (<https://mailman.stanford.edu/pipermail/java-nlp-user/>).
2. `java-nlp-announce` This list will be used only to announce new versions of Stanford JavaNLP tools. So it will be very low volume (expect 1-3 messages a year). Join the list via this webpage (<https://mailman.stanford.edu/mailman/listinfo/java-nlp-announce>) or by emailing `java-nlp-announce-join@lists.stanford.edu`. (Leave the subject and message body empty.)
3. `java-nlp-support` This list goes only to the software maintainers. It's a good address for licensing questions, etc. **For general use and support questions, you're better off joining and using `java-nlp-user`.** You cannot join `java-nlp-support`, but you can mail questions to `java-nlp-support@lists.stanford.edu`.

Release History

Version	Date	Description
1.0	Oct 29, 2014	Release code

Stanford NLP Group

Gates Computer Science Building

353 Serra Mall

Stanford, CA 94305-9020

Directions and Parking (<http://forum.stanford.edu/visitors/directions/gates.php>)

Affiliated Groups

- ▶ Stanford AI Lab (<http://ai.stanford.edu/>)
- ▶ Stanford InfoLab (<http://infolab.stanford.edu/>)
- ▶ CSLI (<https://www-csli.stanford.edu/>)

Connect

- ▶ Stack Overflow (<http://stackoverflow.com/tags/stanford-nlp>)
- ▶ Github (<https://github.com/stanfordnlp/CoreNLP>)
- ▶ Twitter (<https://twitter.com/stanfordnlp>)

Local links

NLP lunch (/local/nlp_lunch.shtml) · NLP Reading Group (<http://nlp.stanford.edu/read/>)

NLP Seminar (<http://nlp.stanford.edu/seminar/>) · Calendar (/local/calendar.shtml)

JavaNLP (/javanlp/) (javadocs (/nlp/javadoc/javanlp/)) · machines (/local/machines.shtml)

AI Speakers (<http://ai.stanford.edu/portfolio-view/distinguished-speaker-series>) · Q&A (/local/qa/)