

The MIT Press

Journals

Sign In / Register

Books

Journals

Digital

Resources

About

Contact

Home | Computational Linguistics | List Article navigation of Issues | Volume 34 , No. 2 | The Importance of Syntactic Parsing and Inference in Semantic Role Labeling



The Importance of Syntactic Parsing and Inference in Semantic Role Labeling

Vasin Punyakanok, Dan Roth and Wen-tau Yih

Quarterly (March, June, September, December)

160pp. per issue

6 3/4 x 10

Founded: 1974

2018 Impact

Factor: 1.319

2018 Google

Scholar h5-index:

32

ISSN: 0891-2017

E-ISSN: 1530-9312

Posted Online June 13, 2008

<https://doi.org/10.1162/coli.2008.34.2.257>

© 2008 Massachusetts Institute of Technology

Computational Linguistics
Volume 34 | Issue 2 | June 2008
p.257-287

Download Options

Journal Resources

- Editorial Info
- Abstracting and Indexing
- Release Schedule
- Advertising Info

Abstract Authors

We present a general framework for semantic role labeling. The framework combines a machine-learning technique with an integer linear programming-based inference procedure, which incorporates linguistic and structural constraints into a global decision process. Within this framework, we study the role of syntactic parsing

Author Resources

Submission Guidelines
Publication Agreement
Author Reprints

Reader Resources

Rights and Permissions
Most Read
Most Cited

More About Computational Linguistics ∨

Metrics ∨




76 Total citations

20 Recent citations

12 Field Citation Ratio

n/a Relative Citation Ratio

Open Access ∨

 Computational Linguistics Computational Linguistics is Open Access. All content is freely available in




information in semantic role labeling. We show that full syntactic parsing information is, by far, most relevant in identifying the argument, especially, in the very first stage – the pruning stage. Surprisingly, the quality of the pruning stage cannot be solely determined based on its recall and precision. Instead, it depends on the characteristics of the output candidates that determine the difficulty of the downstream problems. Motivated by this observation, we propose an effective and simple approach of combining different semantic role labeling systems through joint inference, which significantly improves its performance.

Our system has been evaluated in the CoNLL-2005 shared task on semantic role labeling, and achieves the highest F_1 score among 19 participants.

Forthcoming

Most Read

[See More](#)

 Lexicon-Based Methods for Sentiment Analysis (14057 times) Maite Taboada et al. Computational Linguistics Volume: 37, Issue: 2, pp. 267-307	 Computational Linguistics and Deep Learning (10535 times) Christopher D. Manning Computational Linguistics Volume: 41, Issue: 4, pp. 701-707	 Near-Synonymy and Lexical Choice (3670 times) Philip Edmonds et al. Computational Linguistics Volume: 28, Issue: 2, pp. 105-144
---	--	---


(Note that the Most Read numbers are based on the number of full text downloads over the last 12 months.)


Most Cited


[See More](#)

electronic format (Full text HTML, PDF, and PDF Plus) to readers across the globe. All articles are published under a [CC BY-NC-ND 4.0 license](#). For more information on allowed uses, please view the CC license.

[Support OA at MITP](#)



 **Lexicon-Based Methods for Sentiment Analysis** (436 times)
Maite Taboada et al.
Computational Linguistics
Volume: 37, Issue: 2, pp. 267-307

 **A Systematic Comparison of Various Statistical Alignment Models** (174 times)
Franz Josef Och et al.
Computational Linguistics
Volume: 29, Issue: 1, pp. 19-51

 **Opinion Word Expansion and Target Extraction through Double Propagation** (147 times)
Guang Qiu et al.
Computational Linguistics
Volume: 37, Issue: 1, pp. 9-27

(Note that the Most Cited numbers are based on Crossref's [Cited-by service](#) and reflect citation information for the past 24 months.)

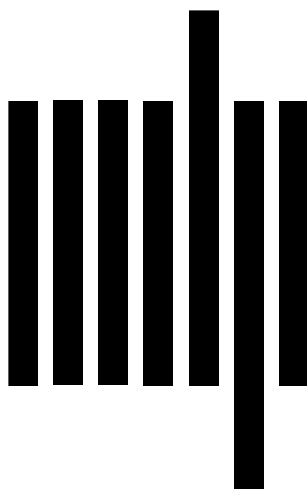
 **Download >**
Options

Favorite  Sign up for Alerts 

Download Citation  RSS TOC 

RSS Citation  Submit your article

[Support OA at MITP](#) 



Journals

Terms & Conditions

Privacy Statement

Contact Us

Books

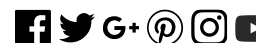
US

UK

Connect

One Rogers Street
Cambridge MA
02142-1209

Suite 2, 1 Duchess
Street London,
W1W 6AN, UK



© 2018 The MIT Press
Technology Partner:
[Atypon Systems, Inc.](#)
[CrossRef Member](#)
[COUNTER Member](#)
The MIT Press colophon is registered in the U.S. Patent and Trademark Office.
[Site Help](#)