The MIT Press

Journals

Books   Journals   Digital   Resources   About   Contact

Home | Computational Linguistics | List Article navigation of Issues | Volume 39 , No. 3 | Relational Features in Fine-Grained Opinion Analysis

Journal Resources

Editorial Info
Abstracting and Indexing
Release Schedule
Advertising Info

Author Resources

Submission Guidelines
Publication Agreement
Author Reprints

Relational Features in Fine-Grained Opinion Analysis

Richard Johansson and Alessandro Moschitti

👁 **Download Options** ＞

Abstract   Full Text   Authors

Fine-grained opinion analysis methods often make use of linguistic features but typically do not take the interaction between opinions into account. This article describes a set of experiments that demonstrate that relational features, mainly derived from dependency-syntactic and semantic role structures, can significantly improve the performance of automatic systems for a number of fine-grained opinion analysis tasks: marking up opinion expressions, finding opinion holders, and

Reader Resources

Rights and Permissions
Most Read
Most Cited

More About Computational Linguistics ⌄

Metrics ⌄

Open Access ⌄

Computational Linguistics Computational Linguistics is Open Access. All content is freely available in electronic format (Full text HTML, PDF, and PDF Plus) to readers across the globe. All articles are

determining the polarities of opinion expressions. These features make it possible to model the way opinions expressed in natural-language discourse interact in a sentence over arbitrary distances. The use of relations requires us to consider multiple opinions simultaneously, which makes the search for the optimal analysis intractable. However, a reranker can be used as a sufficiently accurate and efficient approximation.

A number of feature sets and machine learning approaches for the rerankers are evaluated. For the task of opinion expression extraction, the best model shows a 10-point absolute improvement in soft recall on the MPQA corpus over a conventional sequence labeler based on local contextual features, while precision decreases only slightly. Significant improvements are also seen for the extended tasks where holders and polarities are considered: 10 and 7 points in recall, respectively. In addition, the systems outperform previously published results for unlabeled (6 F-measure points) and polarity-labeled (10–15 points) opinion expression extraction. Finally, as an extrinsic evaluation, the extracted MPQA-style opinion expressions are used in practical opinion mining tasks. In all scenarios considered, the machine learning features derived from the opinion expressions lead to statistically significant improvements.

Forthcoming

Most Read   See More

Lexicon-Based Methods for Sentiment Analysis (13965 times)
Maite Taboada et al.
Computational Linguistics
Volume: 37, Issue: 2, pp. 267-307

Computational Linguistics and Deep Learning (10500 times)
Christopher D. Manning
Computational Linguistics
Volume: 41, Issue: 4, pp. 701-707

Near-Synonymy and Lexical Choice (3653 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

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.)

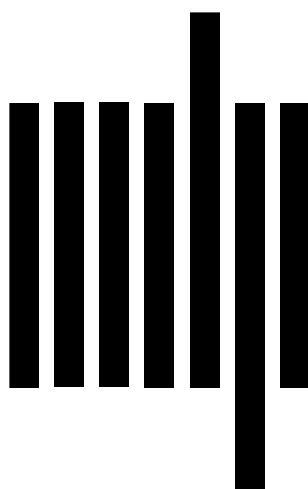## ◎ Download ❯ Options

Favorite ♡   Sign up for Alerts 🔔

Download Citation ↓   RSS TOC 📶

RSS Citation 📶   Submit your article

Support OA at MITP 🔓

Journals

Books

Terms & Conditions
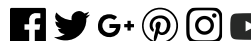
Privacy Statement

Contact Us

US

One Rogers Street Cambridge MA 02142-1209

UK

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

Connect

f 🐦 G+ ⓟ 📷 ▶

Trademark Office.

Trademark Office.