

Natural Language Processing

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II. Corpus Linguistics

III. Words

IV. Syntax

V. Semantics

VI. Pragmatics

VII. Speech

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Objectives

- ❑ understand the basics of language processing
- ❑ acquire background on selected elements of language processing theory
- ❑ implement and apply NLP algorithms in practice
- ❑ comprehend practical considerations, enabling comparative evaluation
- ❑ being able to educate oneself

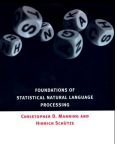
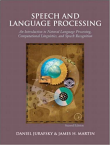
Related Fields

1. Linguistics [paradigms, models]
2. Statistics
3. Psychology
4. Machine Learning [methods, algorithms]
5. Data Mining
6. Information Retrieval
7. Knowledge Processing
8. Text-to-Speech Systems [applications]
9. Dialog Systems
10. Conversational Systems

Literature

Natural Language Processing:

- ❑ D. Jurafsky, J. H. Martin.
Speech and Language Processing
Prentice Hall 2008.
- ❑ C. D. Manning, H. Schütze.
Foundations of Statistical Natural Language Processing
MIT Press 1999.



Literature

Top-tier natural language processing conferences:

- ❑ **AACL.**
Conference of the Asian Chapter of the ACL.
- ❑ **ACL.** (the only A* NLP conference)
Annual Meeting of the Association for Computational Linguistics.
- ❑ **COLING.** (linguistic focus)
International Conference on Computational Linguistics.
- ❑ **CoNLL.**
International Conference on Natural Language Learning.
- ❑ **EACL.**
Conference of the European Chapter of the Association for Computational Linguistics.
- ❑ **EMNLP.** (empirical focus, probably the second best NLP conference)
Conference on Empirical Methods in Natural Language Processing.
- ❑ **NAACL.** Conference of the North-American Chapter of the ACL.

Literature

Other relevant natural language processing conferences:

- ❑ CICLing.
International Conference on Computational Linguistics and Intelligent Text Processing.
- ❑ IJCNLP.
International Joint Conference on Natural Language Processing.
- ❑ INLG. (generation focus)
International Conference on Natural Language Generation.

Conferences from related fields:

- ❑ SIGIR, ECIR, ICTIR, AIRS, CHIIR, TREC, CLEF
- ❑ CIKM, WSDM, WWW, SPIRE

Top-tier Journals:

- ❑ ACM TOIT. toit.acm.org
- ❑ Computational Linguistics. www.mitpressjournals.org/loi/coli
- ❑ TACL. Transactions of the ACL. transacl.org

Software

Industry (Closed Source):

- ❑ ExplosionAI
prodi.gy: An Annotation Tool Powered by Active Learning
prodi.gy

Industry (Open Source):

- ❑ ExplosionAI
spaCy: Industrial-Strength Natural Language Processing
spacy.io
- ❑ Hiroki Nakayama
Doccano: Text annotation for Human
doccano.herokuapp.com

Research:

- ❑ NLTK Project
Natural Language Toolkit
nltk.org
- ❑ Peng Qi, Yuhao Zhang, Yuhui Zhang, Jason Bolton and Christopher D. Manning
Stanza - A Python NLP Library for Many Human Languages
stanfordnlp.github.io/stanza/