Graph-based Methods for Natural Language Processing

Reading list

Simone Paolo Ponzetto – HS WS 2010/11

COREFERENCE RESOLUTION

- Cristina Nicolae, Gabriel Nicolae: BESTCUT: A Graph Algorithm for Coreference Resolution. EMNLP 2006:275-283 [PDF]
- Vincent Ng: Graph-Cut-Based Anaphoricity Determination for Coreference Resolution. HLT-NAACL 2009: 575-583 [PDF]
- Cai, Jie; Strube, Michael (2010). End-to-End Coreference Resolution via Hypergraph Partitioning In: COLING '10, pp.143-151 [PDF]

CLUSTERING ALGORITHMS FOR NLP

- C. Biemann (2006) Chinese Whispers - an Efficient- Graph Clustering Algorithm and its Application to Natural Language Processing Problems. In Proceedings of the HLT-NAACL-06 Workshop on Textgraphs-06
- C. Biemann (2006). Unsupervised Natural Language Processing using Graph Models. In Proceedings of the NAACL-HLT 2007 Doctoral Consortium, pages 37–40 [PDF]
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INFORMATION RETRIEVAL

- Brin, S. and Page, L. (1998) The anatomy of a large-scale hypertextual Web search engine, Computer Networks and ISDN Systems, [PDF]
- Page, L. and Brin, S. and Motwani, R. and Winograd, T. (1999) The PageRank Citation Ranking: Bringing Order to the Web. Technical Report. Stanford InfoLab [PDF]
- Kleinberg, Jon (1999). "Authoritative sources in a hyperlinked environment" (PDF). Journal of the ACM 46 (5): 604–632 [PDF]

- Taher H. Haveliwala (2003) Topic-Sensitive PageRank: A Context-Sensitive Ranking Algorithm for Web Search, *IEEE Transactions on Knowledge and Data Engineering* [PDF]

LEARNING WITH GRAPHS

- Acrim Blum and Shuchi Chawla. Learning from Labeled and Unlabeled Data using Graph Mincuts. In Proceedings of ICML '01, pp. 19-26 [PS]
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- A. Alexandrescu and K. Kirchhoff. 2007. Data-driven graph construction for semi-supervised graph-based learning in NLP. In Proc. of HLT 2007 [PDF]

NATURAL LANGUAGE GENERATION

- Emiel Krahmer; Sebastiaan van Erk; André Verleg (200) Graph-Based Generation of Referring Expressions. Computational Linguistics 23:53 - 72 [PDF]

OPINION MINING / SENTIMENT ANALYSIS

- Pang, Bo and Lillian Lee. 2004. A sentimental education: Sentiment analysis using subjectivity summarization based on minimum cuts. In Proceedings of the 42nd ACL, pages 271–278 [PDF]
- A. Goldberg and J. Zhu. 2006. Seeing stars when there aren't many stars: Graph-based semi-supervised learning for sentiment categorization. In HLT-NAACL Workshop on Graph-based Algorithms for Natural Language Processing [PDF]
- Esuli, Andrea and Fabrizio Sebastiani. 2007. Pageranking wordnet synsets: An application to opinion mining. In Proceedings of the ACL, pages 424–431 [PDF]
- Su, F; Markert, K. 2009. Subjectivity Recognition on Word Senses via Semi-supervised Mincuts. In Proceedings of NAACL-2009 [PDF]

RESOURCE INDUCTION / INFORMATION EXTRACTION

- R. Navigli. Using Cycles and Quasi-Cycles to Disambiguate Dictionary Glosses. Proc. of 12th Conference of the European Association for

Computational Linguistics (EACL 2009), Athens, Greece, March 30-April 3rd, 2009, pp. 594-602 [PDF]

- R. Navigli, P. Velardi. Learning Word-Class Lattices for Definition and Hypernym Extraction. Proc. of the 48th Annual Meeting of the Association for Computational Linguistics (ACL 2010), Uppsala, Sweden, July 11-16, 2010, pp. 1318-1327 [PDF]
- Mausam, Stephen Soderland, Oren Etzioni, Daniel S. Weld, Kobi Reiter, Michael Skinner, Marcus Sammer, Jeff Bilmes. "Panlingual Lexical Translation via Probabilistic Inference". Artificial Intelligence Journal (AIJ). Volume 174 Issues 9-10 (2010) 619-637 [PDF]
- Partha Pratim Talukdar and Fernando Pereira. 2010. Experiments in Graph-based Semi-Supervised Learning Methods for Class-Instance Acquisition. In Proceedings of ACL-10, pages 1473–1481 [PDF]

SEMANTIC SIMILARITY/RELATEDNESS

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- Daniel Ramage, Eric Yeh, Eneko Agirre and Aitor Soroa (2009). WikiWalk: Random walks on Wikipedia for Semantic Relatedness. In Proceedings of the 2009 Workshop on Graph-based Methods for Natural Language Processing [PDF]

SUMMARIZATION

- Vivi Nastase and Stan Szpakowicz (2006) A Study of Two Graph Algorithms in Topic-driven Summarization. In Proceedings of the HLT-NAACL-06 Workshop on Graph-based Methods for Natural Language Processing [PDF]
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- Vivi Nastase (2008). Topic-Driven Multi-Document Summarization with Encyclopedic Knowledge and Spreading Activation. In Proceedings of EMNLP-08 [PDF]

TEXT ENTAILMENT/INFERENCE

- A. Haghighi, A. Ng, and C.D. Manning. 2005. Robust textual inference via graph matching. Proceedings of EMNLP, pages 387–394 [PDF]

WORD SENSE DISAMBIGUATION / INDUCTION

- Dominic Widdows, Beate Dorow (2002) A Graph Model for Unsupervised Lexical Acquisition. In Proceedings of COLING [PDF]
- J. Véronis. 2004. HyperLex: Lexical Cartography for Information Retrieval. Computer Speech & Language 18(3) [PDF]
- Rada Mihalcea, Paul Tarau and Elizabeth Figa, PageRank on Semantic Networks, with application to Word Sense Disambiguation, in Proceedings of COLING 2004 [PDF]
- Mihalcea, Rada (2005) Unsupervised large-vocabulary word sense disambiguation with graph-based algorithms for sequence data labeling. In Proceedings of HLT/EMNLP, pages 411–418 [PDF]
- Navigli, Roberto and Paola Velardi. 2005. Structural semantic interconnections: A knowledge-based approach to word sense disambiguation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 27(7), pages 1075–1086 [PDF]
- Agirre E., Lopez de Lacalle O., Martinez D., Soroa A. (2006) Two graph-based algorithms for state-of-the-art WSD. In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP), pages 585–593 [PDF]
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- R. Navigli, M. Lapata. An Experimental Study of Graph Connectivity for Unsupervised Word Sense Disambiguation. IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 32(4), IEEE Press, 2010, pp. 678-692 [PDF]