Ms. Lingjia Deng

CONTACT
INFORMATION

Intelligent Systems Program
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RESEARCH
INTERESTS

Natural Language Processing and Machine Learning,
specialized in Sentiment Analysis, Information Extraction, Probabilistic Graphical Model.

EDUCATION

University of Pittsburgh, Pittsburgh, Pennsylvania USA   August 2016 (*expected*)

Ph.D. Candidate in Aritifical Intelligence, Intelligent Systems Program   GPA: 3.78/4.0
- Dissertation Topic: "Entity/Event-Level Sentiment Detection and Inference"
- Advisor: Janyce Wiebe (wiebe@cs.pitt.edu)
- Google Scholar Profile: https://scholar.google.com/citations?user=bdusOT8AAAAJ

Beijing University of Posts and Telecommunication, Beijing, China   August 2011

B.Eng., Intelligent Science and Technology   GPA: 88/100

RESEARCH
EXPERIENCE

University of Pittsburgh, Pittsburgh, PA   **09/2013 - current**
Research Assistant, Intelligent Systems Program   Mentor: Janyce Wiebe

- Lead the development of several corpora providing pioneering resources for entity/event-level sentiment detection and inference, available at http://mpqa.cs.pitt.edu/corpora/.
- Implemented Loopy Belief Propagation model to infer sentiments toward agents and themes given the event structure in the text. Optimized inferred sentiments by building an Integer Linear Programming framework.
- Developed statistical relational learning models (Markov Logic Network) integrating probabilistic models of sentiment analysis and information extraction, first order logic rules for sentiment inference together to infer sentiments expressed toward entities and events in the blogs and editorials.

IBM Almaden Research, San Jose, CA   **06/2015 - 08/2015**
Research Intern, System T   Mentor: Marina Danilevsky & Yunyao Li

Proposed paraphrasing extraction methods to mitigate the recall problem of information extraction from database. Built systems to identity paraphrases of the information returned according to a database query, so that similar information with the same meanings but does not exactly match database queries can be extracted. Implemented a fast filtering method combining semantic role analysis and linguistic resources to filter out irrelevant information in the database. Developed systems to interactively adjust paraphrase extraction results according to expected users' feedback.

Text Analysis Conference KBP Sentiment Track   **06/2014 - 08/2014**
Research Project   Collaborators: NLP Groups at Cornell University and North Texas University

Built part of an opinion-based Question Answering system to answer questions such as "Who is President Obama positive toward?", providing a list of people, organizations, or other entities. Indexed large quantity of documents in Apache database and extracted opinions from the documents. Detected different mentions of the same person combining Wikipedia resource and co-reference resolution.

CONFERENCE PUBLICATIONS	**Lingjia Deng** and Janyce Wiebe. Joint Prediction for Entity/Event-Level Sentiment Analysis using Probabilistic Soft Logic Models. *Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2015.
	Lingjia Deng and Janyce Wiebe. MPQA 3.0: An Entity/Event-Level Sentiment Corpus. *Proceedings of the 2015 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT)*, 2015.
	Lingjia Deng, Janyce Wiebe and Yoonjung Choi. Joint Inference and Disambiguation of Implicit Sentiments via Implicature Constraints. *Proceedings of COLING 2014, the 25th International Conference on Computational Linguistics: Technical Papers (COLING)*, 2015.
	Lingjia Deng and Janyce Wiebe. Sentiment Propagation via Implicature Constraints. *Proceedings of the 14th Conference of the European Chapter of the Association for Computational Linguistics (EACL)*, 2015.
	Lingjia Deng and Janyce Weibe. Benefactive/Malefactive Event and Writer Attitude Annotation. *Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers) (ACL)*, 2013.
WORKSHOP PUBLICATIONS	**Lingjia Deng**. Entity/Event-Level Sentiment Detection and Inference. *Proceedings of the 2015 Conference of the North American Chapter of the Association for Computational Linguistics: Student Research Workshop (NAACL-Workshop)*, 2014.
	Lingjia Deng and Janyce Wiebe. An Investigation for Implicatures in Chinese : Implicatures in Chinese and in English are similar! *Proceedings of the 5th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis (ACL-Workshop)*, 2014.
	Janyce Wiebe and **Lingjia Deng**. A Conceptual Framework for Inferring Implicatures. *Proceedings of the 5th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis (ACL-Workshop)*, 2014.
	Yoonjung Choi, **Lingjia Deng** and Janyce Wiebe. Lexical Acquisition for Opinion Inference: A Sense-Level Lexicon of Benefactive and Malefactive Events. *Proceedings of the 5th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis (ACL-Workshop)*, 2014.
	Carmen Banea, Yoonjung Choi, **Lingjia Deng**, Samer Hassan, Michael Mohler, Bishan Yang, Clair Cardie, Rada Mihalcea, and Janyce Wiebe. CPN-CORE: A Text Semantic Similarity System Infused with Opinion Knowledge. *Second Joint Conference on Lexical and Computational Semantics (*SEM), Volume 1: Proceedings of the Main Conference and the Shared Task: Semantic Textual Similarity*, 2013.
ARXIV	Janyce Wiebe and **Lingjia Deng**. An Account of Opinion Implicatures. arXiv:1404.6491 [cs.CL], 2014.
PAPER IN SUBMISSION	**Lingjia Deng** and Janyce Wiebe. Recognizing Opinion Sources Based on A New Categorization of Opinion Types. *In submission to IJCAI 2016.*
	Lingjia Deng and Janyce Wiebe. How can NLP Tasks Mutually Benefit Sentiment Analysis? A Holistic Approach to Sentiment Analysis. *In submission to NAACL 2016.*

AWARDS
- NAACL Student Travel Award 2015
- Andrew Mellon Pre-doctoral Fellowship, University of Pittsburgh 2014
- Pre-doctoral Fellowship, University of Pittsburgh 2011
- Chinese National Scholarship, Ministry of Education of China 2011
- SAMSUNG scholarship, SAMSUNG Corporation 2009
- First-Class Scholarship, Beijing University of Posts & Telecommunications 2008
- Outstanding Student, Beijing University of Posts & Telecommunications 2008, 2009, 2010

ACADEMIA SERVICES
- Program Committee Member of North American Chapter of the Association for Computational Linguistics (NAACL2016).
- Journal Reviewer for IEEE Transactions on Big Data.
- Reviewer for Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis (WAASA2015)

SKILLS
- Java, Python, Groovy, Scala, Matlab
- NLTK, Stanford CoreNLP, GATE, Weka, MALLET, Linux
- Chinese, English