

# Qiang (John) Ning

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**Research interest:** indirectly supervised learning, natural language understanding, data science, and their applications in societal, financial and healthcare problems.

## EDUCATION

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- **University of Illinois at Urbana-Champaign** *Aug. 2016 – Dec. 2019*  
*Ph.D., Natural Language Understanding and Machine Learning, Advisor: Dan Roth*  
*Dissertation: [Understanding time in natural language text](#)*
- **University of Illinois at Urbana-Champaign** *Aug. 2013 – July. 2016*  
*M.S., Biomedical Imaging and Signal Processing, GPA: 4.0/4.0, Advisor: Zhi-Pei Liang*  
*Dissertation: [Spectral estimation with spatio-spectral constraints for magnetic resonance spectroscopic imaging](#)*
- **Tsinghua University** *Aug. 2009 – July. 2013*  
*Bachelor, Electronic Engineering, GPA: 91/100*  
*Bachelor, Economics, GPA: 90/100*

## EXPERIENCE

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- **Allen Institute for AI** Irvine, CA *Sep. 2019 – Now*  
*Research Scientist (AllenNLP)*
  - **Event:** Improving reading comprehension capabilities related to events, such as time, causality, and common sense.
  - **Learning:** Aiming to gain a deeper understanding, both in theory and in practice, of why and how humans/machines learn from indirect and often little supervision.
  - **Crowdsourcing:** Developing tools for fast deployment of crowdsourcing jobs with quality control and user-friendly interface.
- **Facebook** Seattle, WA *May 2017 – Aug. 2017*  
*Intern (Ads Ranking)*
  - **RSVP:** is a type of advertisements that encourage users' engagement. My new production models improved the long-term revenue by 10% (for RSVP only) and 0.4% (overall).
  - **Conversion Rate Calibration:** is crucial for quick responses to drifts in user behaviors. My new production model based on gradient-boosted decision trees and sparse neural nets improved the overall long-term revenue by 0.7%.
- **Microsoft Research Asia** Beijing, China *Mar. 2012 – Jun. 2012*  
*Intern (Mobile And Sensing Systems)*
  - **Walkie Markie:** I carried out feasibility test for using Wi-Fi fingerprints for indoor localization and map reconstruction, including Android software development and proposing new algorithms.

## SELECTED PUBLICATIONS

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1. [ACL'2020] H. He, Q. Ning, and D. Roth. "QuASE: Question-Answer Driven Sentence Encoding." *Annual Meeting of the Association for Computational Linguistics*. [Better transfer learning from QA signals]

2. [ACL'2020] B. Zhou, Q. Ning, and D. Roth. "Temporal Common Sense Acquisition with Minimal Supervision." *Annual Meeting of the Association for Computational Linguistics*. [Temporal common sense acquisition from text]
3. [CoNLL'2019] H. Peng, Q. Ning, and D. Roth. "KnowSemLM: A Knowledge Infused Semantic Language Model." *The SIGNLL Conference on Computational Natural Language Learning*. [Semantic language modeling]
4. [EMNLP'2019] R. Han, Q. Ning, and N. Peng. "Joint Event and Temporal Relation Extraction with Shared Representations and Structured Prediction." *Empirical Methods in Natural Language Processing*. [End-to-end temporal relation extraction]
5. [EMNLP'2019] B. Zhou, D. Khashabi, Q. Ning, and D. Roth. "'Going on a vacation takes longer than 'Going for a walk: A Study of Temporal Commonsense Understanding.'" *Empirical Methods in Natural Language Processing*. [Temporal common sense evaluation benchmark]
6. [EMNLP'2019] Q. Ning, S. Subramanian, and D. Roth. "An Improved Neural Baseline for Temporal Relation Extraction." *Empirical Methods in Natural Language Processing*.
7. [ISIT'2019] E. Graves, Q. Ning, and P. Basu. "An information theoretic model for summarization, and some basic results." *IEEE International Symposium on Information Theory*. [Summarization and information theory]
8. [NAACL'2019] Q. Ning, H. He, C. Fan, and D. Roth. "Partial Or Complete, That's The Question." *North American Chapter of the Association for Computational Linguistics*.
9. [EMNLP'2018] Q. Ning, B. Zhou, Z. Feng, H. Peng, and D. Roth. "CogCompTime: A Tool for Understanding Time in Natural Language." *Empirical Methods in Natural Language Processing*. [A state-of-the-art tool for understanding time in language]
10. [ACL'2018] Q. Ning, H. Wu, and D. Roth. "A Multi-Axis Annotation Scheme for Event Temporal Relations." *Annual Meeting of the Association for Computational Linguistics*. [A new dataset with approx. 20% improvement in inter-annotator agreement]
11. [ACL'2018] Q. Ning, Z. Feng, H. Wu, and D. Roth. "Joint Reasoning for Temporal and Causal Relations." *Annual Meeting of the Association for Computational Linguistics*.
12. [\*SEM'2018] Q. Ning, Z. Yu, C. Fan, and D. Roth. "Exploiting Partially Annotated Data in Temporal Relation Extraction." *Joint Conference on Lexical and Computational Semantics*. [Incidental supervision and its implications on human annotations]
13. [NAACL'2018] Q. Ning, H. Wu, H. Peng, and D. Roth. "Improving Temporal Relation Extraction with a Globally Acquired Statistical Resource." *North American Chapter of the Association for Computational Linguistics*. [A knowledge-base encoding temporal common sense]
14. [EMNLP'2017] Q. Ning, Z. Feng, and D. Roth. "A Structured Learning Approach to Temporal Relation Extraction." *Empirical Methods in Natural Language Processing*. [A case study of structured learning on temporal reasoning]

15. [TBME'2016] **Q. Ning**, C. Ma, F. Lam, and Z.-P. Liang. "Spectral Quantification for High-Resolution MR Spectroscopic Imaging with Spatiospectral Constraints." *IEEE Transactions on Biomedical Engineering*. [**Brain anatomy guided metabolite measuring and theoretical analysis via the Cramér-Rao bound**]
16. [ISBI'2015] **Q. Ning**, C. Ma, and Z.-P. Liang. "Spectral Estimation for Magnetic Resonance Spectroscopic Imaging with Spatial Sparsity Constraints." *IEEE International Symposium on Biomedical Imaging*.
17. [SPL'2013] **Q. Ning**, K. Chen, L. Yi, C. Fan, Y. Lu, and J. Wen. "Image Super-Resolution via Analysis Sparse Prior." *IEEE Signal Processing Letters*. [**Image super-resolution via compressed sensing**]

#### AWARDS

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- **List of Teachers Ranked as Excellent by Their Students:** for ECE120, UIUC, 2017
- **The YEE Fellowship:** College of Engineering, UIUC, 2015-2016
- **Finalist for the Best Paper Award:** IEEE ISBI, New York, 2015
- **Academic Excellence Scholarship:** Tsinghua University, Beijing, China, 2012, 2010
- **Excellence in Science and Technology Scholarship:** Tsinghua University, Beijing, China, 2012
- **National Scholarship:** Tsinghua University, Beijing, China, 2011

#### TEACHING

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- **Teaching assistant for Machine Learning (CS446; Spring 2017) and Introduction to Computing (ECE120; Fall 2016):** Responsible for lectures in weekly discussion sessions, office hours, homeworks, and exams.