

Jing Ma

Ph.D. candidate.

**Department of Systems Engineering and
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Education

- **Ph.D., Information System – Natural Language Processing**
The Chinese University of Hong Kong, 2016 – now
Department of Systems Engineering and Engineering Management
Supervisor: Kam-Fai Wong (CUHK) | Wei Gao (Victoria University of Wellington, New Zealand)
- **M.S., Computer Science – Natural Language Processing**
Beijing University of Posts and Telecommunications, 2013 – 2016
- **B.Eng., Telecommunications Engineering**
Beijing University of Posts and Telecommunications, 2009 – 2013
School of Information and Communications Engineering

Research Interests

- Artificial Intelligence, Machine Learning – Statistical Relational Learning, Feature Learning, Deep Learning
- Social Media Analytics – Twitter, Sina Weibo, Facebook, etc
- Natural Language Processing – Classification tasks, Ranking tasks
- Information Retrieval – (UN)Structured Data
- Information Verification – Rumor Detection, Stance Classification, Fact Checking, Truth Discovery

Selected Publications (Citations:491)

– Peer Review Works

- An Attention-based Hybrid Model for Rumor Detection with Tree-structured Recursive Neural Networks
Jing Ma, Wei Gao, Shafiq Joty, and Kam-Fai Wong
Submitted to TIST: ACM Transactions on Intelligent Systems and Technology

– Conference Papers

- Sentence-Level Evidence Embedding for Claim Verification with Hierarchical Attention Networks
Jing Ma, Wei Gao, Shafiq Joty, and Kam-Fai Wong
ACL 2019: The 57th Annual Meeting of the Association for Computational Linguistics, July 2019, Florence, Italy
- Detect Rumors on Twitter by Promoting Information Campaigns with Generative Adversarial Learning
Jing Ma, Wei Gao, and Kam-Fai Wong
WWW 2019: The Web Conference 2019, May 2019, San Francisco, USA

- Rumor Detection on Twitter with Tree-structured Recursive Neural Networks
Jing Ma, Wei Gao, and Kam-Fai Wong
ACL 2018: The 56th Annual Meeting of the Association for Computational Linguistics, July 2018, Melbourne, Australia
- Detect Rumor and Stance Jointly by Neural Multi-task Learning
Jing Ma, Wei Gao, and Kam-Fai Wong
WWW 2018 (Misinformation track): The Web Conference 2018, April 2018, Lyon, France
- Detect Rumors in Microblog Posts Using Propagation via Kernel Learning
Jing Ma, Wei Gao, and Kam-Fai Wong
ACL 2017: The 55th Annual Meeting of the Association for Computational Linguistics, July 2017, Vancouver, Canada
- From Retweet to Believability: Utilizing Trust to Identify Rumor Spreaders on Twitter
Bhavtosh Rath, Wei Gao, **Jing Ma**, and Jaideep Srivastava
ASONAM 2017: The 2017 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, August 2017, Sydney
- Detecting Rumors from Microblogs with Recurrent Neural Networks
Jing Ma, Wei Gao, Prasenjit Mitra, Sejeong Kwon, Bernard J. Jansen, Kam-Fai Wong, and Meeyoung Cha
IJCAI 2016: The 25th International Joint Conference on Artificial Intelligence, July 2016, New York, USA
- Detect Rumors Using Time Series of Social Context Information on Microblogging Websites
Jing Ma, Wei Gao, Zhongyu Wei, Yueming Lu, and Kam-Fai Wong
CIKM 2015: The 24th ACM International Conference on Information and Knowledge Management, October 2015, Melbourne, Australia

– **Journal Papers**

- Utilizing Computational Trust to Identify Rumor Spreaders on Twitter
Bhavtosh Rath, Wei Gao, **Jing Ma**, and Jaideep Srivastava
SNAM: Social Network Analysis and Mining, 8:64, December 2018, Springer

– **Workshop Papers**

- UIR-PKU: Twitter-OpinMiner System for Sentiment Analysis in Twitter at SemEval 2015
Xu Han, Binyang Li, **Jing Ma**, Yuxiao Zhang, Gaoyan Ou, Tengjiao Wang, Kam-Fai Wong
SemEval 2015: The 9th International Workshop on Semantic Evaluation, May 2015, Denver, Colorado, USA

– **Book Chapters**

- Social Media Content Analysis: Natural Language Processing and Beyond
Kam-Fai Wong, Wei Gao, Ruifeng Xu, Wenjie Li
World Scientific Publishing:
Chapter 6: Detect Rumors Using Time Series of Social Context Information on Microblogging

Academic Services

– **Program Committee Member:**

- AAAI 2019-2010, ACL 2019, EMNLP 2019, AI 2019

– **Journal Reviewer:**

- Transactions on Knowledge and Data Engineering (TKDE)
- ACM Transactions on Multimedia Computing, Communications and Applications (TOMM)

- Neurocomputing
- **Conference Reviewer:** EMNLP 2018
- **External Reviewer:** ACL 2015-2018, EMNLP 2015-2017, SIGIR 2016-2017, CIKM 2016-2018, PACLIC 2016, ASONAM 2016-2019
- **Invited Talks:**
 - “Introduction to Natural Language Processing” at Agricultural Bank of China, China, Sep 27th, 2019.
 - “Fake News Detection in the Era of Social Media” at National University of Singapore, Singapore, Aug 30th, 2019.
 - “Detect Rumors on Twitter by Promoting Information Campaigns with Generative Adversarial Learning” at Singapore Management University, Singapore, Apr 3rd, 2019.
 - “Introduction to Rumor-related Research from Social media” at Beijing University of Posts and Telecommunications, China, Mar 29th, 2018.
 - “Detect Rumor and Stance Jointly by Neural Multi-task Learning” at National Taiwan University, Taiwan, Apr 12th, 2018.
 - “Deep Neural Models on Rumor Detection from Social Media” at University of Electric Science and Technology of China, China, Sep 9th, 2018.

Academic Experiences

Visiting Scholar	Nanyang Technological University (Singapore)	Dec.2018 – Aug.2019
<ul style="list-style-type: none"> ▪ Responsibilities: Claim Verification and Fact Checking from multi-sourced web outlets. ▪ Supervisor: Assit Prof. Shaffiq Rayhan Joty ▪ Dept. NLP Lab at School of Computer Science and Engineering (SCSE) 		
Research Intern	Tencent AI lab (Shenzhen, China)	Sep. 2017 – Jan. 2018
<ul style="list-style-type: none"> ▪ Responsibilities: Analytics on Dialog and Text. ▪ Dept. NLP Center 		
Junior Research Assistant	The Chinese University of Hong Kong (Hong Kong)	Jan. 2015 – Jul. 2016
<ul style="list-style-type: none"> ▪ Responsibilities: <ul style="list-style-type: none"> – Developed a method to detect rumors using time series structures on microblogging websites. By analyzing the propagation of tweets/microblogs, we argued that it is of importance not only looking at the overall properties and the properties of individual messages, but also studying the changes or the trends of these properties along the lifecycle. – Collected two datasets from microblogging websites (Twitter and Sina Weibo). Survey and initialize general definitions of “rumor detection” task. Propose effective approaches for detecting rumors at early stage after their initial broadcast. 		
R&D Engineer Intern	Baidu NLP Department (Beijing, China)	Jan. 2014 – May. 2014
<ul style="list-style-type: none"> ▪ Responsibilities: <ul style="list-style-type: none"> – Lexical Analysis: parsing sentence into words, part-of-speech (POS) tagging, named entity recognition (NER), semantic representation. Syntactic Analysis: dependency parsing, semantic role analysis. – Intention Mining: Matching keywords in query precisely. Built query corpus and domain keywords dictionary from search engine logs. – Semantic Analysis Algorithm for Query Searching: pattern-based method, rule-based method (manually make rules for dependency parsing results based on knowledge base), logistic-based method, transition-based method (define basic expression, generate semantic label between two words). 		

R&D Engineer Intern **Ganji.com (Beijing, China)** May. 2013 – Oct. 2013

▪ **Responsibilities:**

- Predicted click through rate (CTR) based on click logs on sponsored advertising, using linear regression model.
 - Developed Recommend system for e-product based on history logs (buying, adding to cart, clicking and adding to favorites behaviors), using collaborative filtering algorithm.
 - Researched and designed an automatic pricing system for e-products. Provided technical support for marketing and promotion arrangements.
- Awarded “**Quarterly Star of Ganji**”.

Honors & Awards

- Online Course Statement of Accomplishment for Machine Learning by Andrew NG Jun. 2014
- Online Course Statement of Accomplishment for Data Mining with Weka Oct. 2015
- Second Prize Scholarship, government-sponsored graduate student 2013 - 2014
- Honorable Mention in 2012 Interdisciplinary Contest In Modeling Certificate of Achievement Jun. 2013
- Third Prize, National College Students’ Electronic Commerce Contest in 2011 May. 2011
- Third Prize Scholarship (top 15%) 2010 - 2012

Participant Projects

Emergent Rumor Detection and Credibility Ranking Jan.2015 - now

- **OVERVIEW:** Extracted useful features for rumor classification, including: sentiment lexicon, emoticon, Ngram, link, hashtag, punctuation, etc. Utilized deep neural networks to improve debunking performance. This project explores to identify rumor events from social media. We proposed several rumor detection frameworks from four aspects: (1) text uncertainty, (2) opinion controversy, (3) opinion-based credibility, (4) structure-based modeling.
- **CORPUS:** We constructed 4 corpuses for “rumor detection” task from Sina Weibo (a Chinese microblogging platform) and Twitter. Human annotation provided for evaluation.
- **PUBLICATION:** 7 top-tier conference papers, 1 journal paper.
- **OPEN SOURCE:** source codes released for two papers.

SemEval 2015: Sentiment Analysis in Twitter Oct.2012 - Dec.2013

- **OVERVIEW:** This project extracted useful features for sentiment classification, including: sentiment lexicon, emoticon, Ngram, link, hashtag, punctuation, etc. We Added topic features using LDA and word embedding features using word2vec to improve the performance of the sentiment classifier. And finally train a classifier to determine a given tweets as positive, negative or neutral sentiment.
- **PUBLICATION:** 1 workshop paper.

Search Engine Research Based on Public Chinese Services **National 863 Project** Oct.2012 - Dec.2013

- **OVERVIEW:** Given comments on products from different domains and classify the users’ opinions into support or deny. This project analyzed document-level textural features, including: opinion-based words, biased words, positive/negative sentiments, etc.
- **CORPUS:** Collected the reviews for products of different domains from online shopping websites
- **PUBLICATION:** 2 conference papers (EI)

Undergraduates’ Innovation Projects Dec.2012 – Mar.2013

- **OVERVIEW:** This project aims to develop two applications respectively named as (1) “Interactive Games based on Situational Awareness”: multiple users can play the same game through wireless connections; and (2) “Interaction Telephone Operator”:

users can operate their accounts without dialing to customer service, realizing data sending and receiving between clients and server.

- **DEMOS: 2** android applications: “Interactive Games based on Situational Awareness”, “Interaction Telephone Operator”

Teaching Assistant & Tutorials

- **SEEM3450:** Engineering Innovation & Entrepreneurship, Fall 2016, 2017, 2018
- **SEEM3550:** Fundamentals in Information Systems, Spring 2017
- **ENGG2450:** Probability and Statistics for Engineers, Spring 2018

Professional Skills

- I would like learn about talented models & techniques proposed year by year.
- Proficient in **C++, Java, Python, PHP, Perl, Shell, Linux system.**
- Be familiar with knowledge in Machine Learning algorithms, Natural Language Processing, Deep Learning models (**Recurrent Neural Networks, Recursive Neural Networks, Convolutional Neural Networks, Generative Adversarial Networks, Attention-based models**, etc), distributed processing of big data, and web source crawler.
- Skilled in processing large-scale machine learning and related tools, including **Map/Reduce, Hadoop** and **Spark**.

Referees

Kam-Fai Wong

PhD, Professor

The Chinese University of Hong Kong

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Wei Gao

PhD, Senior Lecture

Victoria University of Wellington

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Shafiq Rayhan Joty

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Nanyang Technological University

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