

## Duan Junwen

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**Brief Bio** My research interests lie in the areas of natural language processing, deep learning, with special interests on applying NLP techniques to text-driven predictions. I have been working on text-driven stock market prediction (NAACL 2018, COLING 2018, COLING 2016, IJCAI 2015, EMNLP 2014), user intention understanding (**AAAI 2015**, **SMP 2014**) and movie box-office revenue prediction based on social media texts (**SMP 2015**).

**EDUCATION** *Ph.D. candidate*, Harbin Institute of Technology 2015.03 – present  
Major: Computer Science, Supervisor: Prof. Ting Liu

*M.S.*, Harbin Institute of Technology 2013.09 – 2015.03  
Major: Computer Science, Supervisor: Prof. Ting Liu

*B.E.*, Harbin Institute of Technology 2009.09 – 2013.07  
Major: Computer Science (rank 4 out of 74)

**Selected PUBLICATIONS** **Duan, Junwen**, Xiao Ding, and Ting Liu. “*Learning Sentence Representations over Tree Structures for Target-Dependent Classification*”, *NAACL2018*, pages 551-560. (CCF C)

**Junwen Duan**, Yue Zhang, Xiao Ding, Ching-Yun Chang, Ting Liu. “*Learning Target-Specific Representations of Financial News Documents For Cumulative Abnormal Return Prediction*”. In *Proceedings of Coling. 2018* (To appear, CCF B)

**Junwen, Duan**, Xiao Ding, and Ting Liu. “*A Gaussian Copula Regression Model for Movie Box-office Revenues Prediction.*”, *Sci China Inf Sci*, 2016. (SCI Journal, CCF B)

**Junwen, Duan**, Yi-Heng Chen, Ting, Liu and Xiao Ding. “*Mining intention-related products on online q&a community*”, *Journal of Computer Science and Technology*, 2015. (SCI Journal, CCF B)

**Junwen Duan**, Xiao Ding, and Ting Liu. “*Mining intention-related products on online q&a community.*”, In *Social Media Processing*, pages 13-24. Springer, 2014 [Best Paper Honorable Mention]

Xiao Ding, Ting Liu, **Junwen Duan**, and Jian-Yun Nie. “*Mining user consumption intention from social media using domain adaptive convolutional neural network.*”, In *Proceedings of Twenty-Ninth AAAI Conference on Artificial Intelligence*, pages 2389–2395. AAAI Press, 2015.

Xiao Ding, Yue Zhang, Ting Liu, and **Junwen Duan**. “*Deep learning for event-driven stock prediction.*”, In *Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence*, pages 2327-2333. AAAI Press, 2015.

Xiao Ding, Yue Zhang, Ting Liu, and **Junwen Duan**. “Using structured events to predict stock price movement: An empirical investigation.”, In Proceedings of EMNLP 2014, pages 1415-1425.

## PROJECTS

*Event-driven Stock Market Prediction System* Mar 2017– Oct 2017  
We build a prototype system for predicting the market based on daily events. We crawl news articles from online news media and apply our event-driven prediction model to analyze the potential impacts of the events to the market. We then recommend 5 to 10 most promising stocks based on the outputs of our system.

*Movie Box-office Revenue Prediction System* Spring 2014 – Spring 2015  
Project homepage: <http://yc.8wss.com> (no more available). The system collects user tweets and discussions on social media platform about up-coming movies and extracts a variety of features from the user generated data to predict their future market performance. In the project, I was responsible for the data crawler, feature extraction and prediction model implementation.

## INTERNSHIP EXPERIENCE

*Research Assistant* Feb 2016 – Aug 2016  
Singapore University of Technology and Design, Singapore  
I was working as a research assistant under the supervision of Professor *Zhang Yue* on NLP-driven stock market prediction.

*Visiting Student* Oct 2017 – Oct 2018  
University of Illinois at Urbana-Champaign  
I am working with ACM Fellow Prof. Chengxiang Zhai on text-driven prediction.

## COMMUNITY SERVICE

*Student Volunteer*  
The 2015 Conference of the Association for Computational Linguistics. Beijing, China. July 2015

*Teaching Assistant*  
Course: Chinese Information Processing, Prof. Ting Liu Fall 2014  
Course: Statistical Natural Language Processing, Prof. Yue Zhang. Summer 2017  
*Reviewers* NLPCC2016, 2017 and 2018, CCL 2018, First ACL Workshop on EcoNLP.

## AWARDS

The National Scholarship for PhD Student November 2017  
Hua Wei Scholarship Fall 2014  
The National Scholarship for Graduate Student November 2013  
Awarded “Outstanding Graduate of Harbin Institute of Technology” July 2013  
The Fifth National Information Security Contest First Prize, July 2012 (Team Leader)  
The National Scholarship for Undergraduate Student November 2011

## TECHNICAL SKILLS

*Programming Languages:* Python, C++, R, Matlab, Java  
*Operating System:* Linux (Two-year experience as part-time network administrator for my lab)