

## Wei Quan

Lecturer

School of Convergence

Sungkyunkwan University

Seoul, South Korea

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### RESEARCH AREAS

Opinion Mining, Sentiment Analysis, Natural Language Processing, Deep Learning, Big Data, Data Mining, Information Visualization, Cross Cultural Communication, Computer-mediated Communication

### EDUCATION

***Drexel University, Philadelphia, PA*** June 2020

Ph.D. Information Science

***Syracuse University, Syracuse, NY*** May 2015

M.S. Library & Information Science

***Beijing University of Posts & Telecommunications, Beijing, China*** June 2013

B.S. Information & Computing Science

### RESEARCH & PROFESSIONAL EXPERIENCE

School of Convergence, Sungkyunkwan University, Seoul, South Korea

Lecturer, September 2020 – *Present*

- Applied NLP to undergraduate students

College of Computing and Informatics, Drexel University, Philadelphia, PA

*Research Assistant, September 2015 – June 2020*

- BERT based model for aspect-level opinion mining
- BERT based model for opinion role labeling
- BERT based model for graph node label prediction
- Aspect-level opinion mining with Deep Learning
- Opinion mining literature review

## Curriculum Vitae

- Clustering analysis of online course discussion forum
- Paralinguistic features across Chinese, English and Korean Tweets
- Informatics design research

Department of Biomedical and Health Informatics, Children's Hospital of Philadelphia, Philadelphia, PA

*Research Assistant, October 2018 – December 2019*

- Collaboration recommender system
- Deep learning models for social determinants of health classification
- Semantic role labeling literature review
- Deep learning models for suicide risk label prediction

Information Services Department, Children's Hospital of Philadelphia, Philadelphia, PA

*Research Assistant, June 2017 – July 2018*

- Health information seeking behavior using NLP
- Collaboration recommender system
- Association rule mining on EHR data

School of Information Studies, Syracuse University, Syracuse, NY

*Graduate Student Researcher Fellow, September 2014 – May 2015*

- Campaign data collection and analysis

## PUBLICATIONS

### Conference Full Papers

- [P12] Long, X., **Quan, W.**, Chen, Z., Hu, X. (submitted). Protein Secondary Structure Segmentation Modeling Using Word Segmentation Model
- [P11] Zhang, J., **Quan, W.** (submitted). Semi-supervised classification based on Graph Convolution Encoder Representations from Transformers
- [P10] Zhang, J., Hu, X., Jiang, Z., Li, Y., **Quan, W.**, Chen, Z. (submitted). HCNs: Heterogeneous Convolutional Networks for Representation Learning

## Curriculum Vitae

- [P9] **Quan, W.**, Zhang, J., Hu, X. (2019). End-to-End Joint Opinion Role Labeling with BERT. 2019 IEEE International Conference on Big Data. Los Angeles, CA, December 9-12, 2019
- [P8] Zhang, J., Hu, X., Jiang, Z., Song, B., **Quan, W.** (2019). Predicting Disease-related RNA Associations based on Graph Convolutional Attention Network. IEEE International Conference on Bioinformatics and Biomedicine 2019. San Diego, CA, November 18-21, 2019
- [P7] Ruiz, V., Shi, L., **Quan, W.**, Ryan, N., Biernesser, C., Brent, D., Tsui, R. (2019). CLPsych2019 Shared Task: Predicting Suicide Risk Level from Reddit Posts on Multiple Forums. CLPsych at NAACL 2019. Minneapolis, USA, June 2-7, 2019
- [P6] **Quan, W.**, Chen, Z., Hu, X. (2018). BANN: A framework for aspect-level opinion mining. The 6th International Conference on Information Technology: IoT and Smart City. Hong Kong, China, December 29-31, 2018
- [P5] Chen, Z., Yu, X., Ling, Y., Song, B., **Quan, W.**, Hu, X. and Yan, E. (2018). Correlated Anomaly Detection from Large Streaming Data. 2018 IEEE International Conference on Big Data. Seattle, WA, December 10-13, 2018
- [P4] **Quan, W.**, Chen, Z., Gao, J., Hu, X. (2018). Comparative Study of CNN and LSTM based Attention Neural Networks for Aspect-Level Opinion Mining. 2018 IEEE International Conference on Big Data. Seattle, WA, December 10-13, 2018
- [P3] Guerra, J., **Quan, W.**, Li, K., Ahumada, L., Winston, F., Desai, B. (2018). Scosy: A Biomedical Collaboration Recommendation System. 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Honolulu, HI, July 17-21, 2018.
- [P2] **Quan, W.**, Hu, X. (2018). Which airline tops on social media: visualization of Twitter U.S. airline sentiment. 2018 International Conference on Business and Information - Winter Session. Okinawa, Japan, January 23-25, 2018
- [P1] Zhao, C., Zang, Y., **Quan, W.**, Hu, X., Sacan, A. (2017). HIV-1, Human Protein-protein Interaction Prediction Based on Interface Architecture Similarity. IEEE International Conference on Bioinformatics and Biomedicine 2017. Kansas City, MO, November 13-16, 2017

## Short Papers and Posters

- [SP10] Feng, C., Wei, M., **Quan, W.**, Li, D. (2020). Who Gets Hired by Top LIS Schools in China? iConference 2020. Borås, Sweden, March 23-26, 2020
- [SP9] Wang, W., Feng, C., **Quan, W.** (2019). Data-driven control of a class of discrete-time linear complex dynamical networks. 2019 IEEE International Conference on Big Data. Los Angeles, CA, December 9-12, 2019

## Curriculum Vitae

- [SP8] Zhang, J., Hu, X., Jiang, Z., **Quan, W.** (2019). Predicting Disease-related Associations based on A Novel Graph Adversarial Network. 2019 Mid-Atlantic Bioinformatics Conference. Philadelphia, PA, Oct. 11, 2019
- [SP7] Su, R., **Quan, W.** (2019). Visualizing periodicals published in Guangdong during the Republican Era. iConference 2019. Washington, DC, March 31-April 3, 2019
- [SP6] **Quan, W.**, Hu, X. (2018). Opinion Mining and Visualization Framework. 2nd Annual Drexel Emerging Graduate Scholars Conference. Philadelphia, PA, April 19, 2018
- [SP5] Feng, C., **Quan, W.** (2018). Data Analytics in Healthcare: A Case Study of Mining Electronic Health Records, iConference 2018. Sheffield, UK, March 25-28, 2018
- [SP4] Guerra, J., **Quan, W.**, Li, K., Ahumada, L., Desai, B. (2018). SchoSys: A collaboration recommendation system. 1st CHOP Education Symposium: Healthcare Professionals Teaching and Learning Together. Philadelphia, PA, January 24, 2018
- [SP3] **Quan, W.**, Ahumada, L., Zhang, Y., Pappas, J., Desai, B. (2017). Electronic Health Record Clustering Analysis: Association rule mining applied to medications and labs for Pneumonia and Urinary Tract Infections. 2017 Mid-Atlantic Bioinformatics Conference. Philadelphia, PA, Oct. 10, 2017
- [SP2] **Quan, W.**, Park, J. (2017). Use of Paralinguistic Features on Twitter across Chinese, English and Korean Cultures. 46th Annual Mid-Atlantic Region Association for Asian Studies Conference. Philadelphia, PA, October 6-8, 2017
- [SP1] **Quan, W.**, He, J. (2017). Detecting and Visualizing Topic Evolution of a Knowledge Domain in Scientific Literature. 9th Annual Drexel IEEE Graduate Forum's Research Symposium. Philadelphia, PA, Mar. 3, 2017

### Presentations and Invited Talks

- [PIT9] Opinion Mining on Digital Media Data: Advancing State-of-the-art Methods with Deep Learning. Final Defense. May 4, 2020, College of Computing and Informatics, Drexel University.
- [PIT8] End-to-End Joint Opinion Role Labeling with BERT. 2019 IEEE International Conference on Big Data. Los Angeles, CA, December 10, 2019.
- [PIT7] Technical Masterclasses: Digital and Online Portfolios. Invited Talk by Drexel Career Cornerstone Group & Drexel Data Science Club. May 31, 2019, College of Computing and Informatics, Drexel University.
- [PIT6] Opinion Mining from Online Platforms: Advancing state-of-the-art methods with Deep Learning and NLP. Proposal Defense. April 23 & 24, 2019, College of Computing and Informatics, Drexel University.

## Curriculum Vitae

- [PIT5] BANN: A framework for aspect-level opinion mining. The 6th International Conference on Information Technology: IoT and Smart City. December 30, 2018, Hong Kong, China.
- [PIT4] Comparative Study of CNN and LSTM based Attention Neural Networks for Aspect-Level Opinion Mining. 2018 IEEE International Conference on Big Data. Dec. 11, 2018, Seattle, WA.
- [PIT3] Overview of Opinion Mining. Guest presentation for INFO 821 PhD Seminar on Topics in Information Science. May. 08, 2018, College of Computing and Informatics, Drexel University.
- [PIT2] Which airline tops on social media: visualization of Twitter U.S. airline sentiment. 2018 International Conference on Business and Information - Winter Session. Jan. 24, 2018, Okinawa, Japan
- [PIT1] Opinion mining in NLP & Deep Learning. Candidacy Exam. June 15, 2017, College of Computing and Informatics, Drexel University.

## AWARDS

- [A10] 2019-2020 Teck-Kah Lim Graduate Student Domestic Travel Subsidy Award
- [A9] 2019-2020 Drexel University College of Computing and Informatics Travel Award
- [A8] 2018-2019 Drexel University College of Computing and Informatics Travel Award
- [A7] 2018 International Conference on Business and Information Outstanding Paper Award
- [A6] 2017-2018 Drexel University Office of International Programs International Travel Award
- [A5] 2017-2018 Drexel University College of Computing and Informatics Travel Award
- [A4] 2013-2015 D. Whitney Coe Graduate Scholarship
- [A3] 2014-2015 Patricia Hallock Mautino Scholarship
- [A2] 2011 1st Prize China Undergraduate Mathematical Contest in Modeling
- [A1] 2010 Beijing University of Posts & Telecommunications Scholarship

## WORK EXPERIENCE

- Teaching Assistant, College of Computing and Informatics, Drexel University  
*Drexel University, Philadelphia, PA, January 2020 – March 2020*
- Research Assistant, Children's Hospital of Philadelphia  
*Children's Hospital of Philadelphia, Philadelphia, PA, October 2018 – December 2019*

## Curriculum Vitae

- Research Assistant, College of Computing and Informatics, Drexel University  
*Drexel University, Philadelphia, PA, July 2018 – October 2018*
- Research Assistant, Children's Hospital of Philadelphia  
*Children's Hospital of Philadelphia, Philadelphia, PA, June 2017 – July 2018*
- Teaching Assistant, College of Computing and Informatics, Drexel University  
*Drexel University, Philadelphia, PA, January 2017 – June 2017*
- NPR Labs Intern, NPR  
*NPR, Washington, DC, September 2016 – December 2016*
- Teaching Assistant, College of Computing and Informatics, Drexel University  
*Drexel University, Philadelphia, PA, March 2016 – September 2016*
- Research Assistant, College of Computing and Informatics, Drexel University  
*Drexel University, Philadelphia, PA, September 2015 – March 2016*
- Faculty Assistant, School of Information Studies, Syracuse University  
*Syracuse University, Syracuse, NY, September 2014 – May 2015*
- Cataloging Assistant, College of Law Library, Syracuse University  
*Syracuse University, Syracuse, NY, September 2014 – May 2015*
- Test Operator Intern, Samsung Advance Institute of Technology  
*Beijing, China, November 2012 – February 2013*
- Human Resource Intern, Qunar  
*Beijing, China, April 2012 – July 2012*
- Test Operator Intern, Image Research Department  
*Sony China Research Institute, Beijing, China, July 2011 – November 2011*

## VOLUNTEER EXPERIENCE

- Philadelphia Animal Welfare Society, Philadelphia, PA, February 2017 – Present
- iConference 2016, Philadelphia, PA, March 2016
- Computers in Libraries 2014, Washington, D.C., April 2014
- Fayetteville Free Library, Fayetteville, NY, February 2014 – April 2014
- Syracuse University Bird Library, Syracuse, NY, January 2014 – February 2014

## LEADERSHIP ACTIVITIES

## Curriculum Vitae

- Resident Advisor at IHP, Philadelphia, PA, June 2019 – December 2019
- Front Desk Worker at IHP, Philadelphia, PA, October 2018 – June 2019
- Secretary, College of Computing and Informatics Doctoral Student Association, Philadelphia, PA, September 2016 – June 2017
- Board Manager, BYR Team, Beijing, China, September 2010 – December 2013
- Minister, Student Propaganda Department, Beijing, China, September 2009 – August 2010

## **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

- Upsilon Pi Epsilon (Drexel University), December 2016 – Present
- Pi Lambda Sigma Chapter (Syracuse University) of Beta Phi Mu, May 2015 – Present
- American Library Association, September 2013 – September 2015
- New York Library Association, September 2013 – September 2015