

# JIAHENG XIE

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## EDUCATION

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2015 - 2020  
(expected)      **Eller College of Management, The University of Arizona**  
*Ph.D. in Management Information Systems*  
*Minor: Computational Linguistics*

2011 - 2015      **Renmin Business School, Renmin University**  
*B.A. in Management Science and Engineering*  
*Graduated with Honors*

2017 - 2018      **Office of Instruction and Assessment, The University of Arizona**  
*Certificate in College Teaching*

## RESEARCH INTERESTS

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Methods      Deep Learning, Data Mining, Text Mining, Time Series Analysis, Predictive Analytics  
Topics      Business Analytics, Health Risk Analytics, Cybersecurity

## DISSERTATION

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Title      Big Data-Based Health Risk Analytics: A Deep Learning Approach  
            – **2019 ICIS Doctoral Consortium Fellow**

Committee      Daniel Zeng (Chair), Hsinchun Chen (Member), Sue Brown (Member)

## PUBLISHED JOURNAL ARTICLES

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**Xie, J.**, Liu, X., and Zeng, D. (2017). Mining E-cigarette Adverse Events in Social Media Using Bi-LSTM Recurrent Neural Network with Word Embedding Representation. *Journal of the American Medical Informatics Association (JAMIA)* (IF: 4.27). 25 (1), 72-80.

**Xie, J.**, Zeng, D., and Marcum, Z. A. (2017). Using Deep Learning to Improve Medication Safety: the Untapped Potential of Social Media. *Therapeutic Advances in Drug Safety* (IF: 2.84). 8 (12), 375-377.

## PAPERS UNDER REVIEW

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**Xie, J.**, Liu, X., Zeng, D., and Fang, X. Understanding Medication Nonadherence from Social Media: A Sentiment-Enriched Deep Learning Approach. (SSRN↗)

- Revising for the **3<sup>rd</sup> round of review at *MIS Quarterly***
- Best Paper Runner-Up, *International Conference for Smart Health* 2019

**Xie, J.**, Zhang, B., Ma, J., Zeng, D., and Ciganic, J. Readmission Prediction for Patients with Heterogeneous Hazard: A Trajectory-Based Deep Learning Approach. (SSRN↗)

- Revising for the **2<sup>nd</sup> round of review at *Information Systems Research***
- Best Paper Runner-Up, *International Conference for Smart Health* 2018

**Xie, J.**, Zhang, B., Brown, S. A., and Zeng, D. Write Like a Pro or an Amateur? The Effect of Medical Language Formality in Senior Care: A Multi-Method Approach. (SSRN↗)

- Revising for the **2<sup>nd</sup> round of review at *Information Systems Research***

[Pre-Ph.D.] **Xie, J.**, Zhu, W., Wang, K., and Pang, J. The Effect of Web Page Background Color on the Uniqueness of Customized Products.

- Under review at *Information & Management*

## COMPLETED PAPERS

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Ebrahimi, M., **Xie, J.**, Chen, W., and Chen, H. The Impact of FBI Shutdown Operations on Cybercriminals and Product Sales in Dark Net Markets.

- Under final preparation for submission to *MIS Quarterly*

**Xie, J.**, Zhang, Z., Liu, X., and Zeng, D. Discovering Barriers to Opioid Addiction Treatment from Social Media: A Similarity Network-Based Deep Learning Approach. (SSRN↗)

- Under final preparation for submission to *Journal of Management Information Systems*

## RESEARCH IN PROGRESS

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**Xie, J.** and Zeng, D. Predicting Parkinson's Disease Risk Using Wearable Sensor Data: A Multi-View Attention Convolutional Neural Network Approach.

- Method development, targeted at *Information Systems Research*

Chen, W., Xie, K., Jing, D., and **Xie, J.** Customers at Fingertips: A Large-Scale Field Experiment Using Tap Stream Data on Mobile Apps.

- Preparing field experiment, targeted at *Management Science*

**Xie, J.**, Liu, X., and Zeng, D. Bridging the Vocabulary Gap in Online Knowledge Community: A Graph Convolutional Network Approach.

- Method development, targeted at *Information Systems Research*

**Xie, J.**, Zhang, Z., and Zeng, D. Modeling Parkinson’s Disease Progression Using Generative Adversarial Networks.

- Method development, targeted at *MIS Quarterly*

**Xie, J.**, Zeng, D., and Ciganic, J. Predicting Opioid Overdose Using Large-Scale Medicare Data: A Recurrent Neural Networks Approach.

- Data analysis, targeted at *Journal of the American Medical Association (JAMA)*

## CONFERENCE PROCEEDINGS AND WORKSHOPS (\* PRESENTING AUTHOR)

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\***Xie, J.**, Zhang, Z., Liu, X., and Zeng, D. (2019). Discovering Barriers to Opioid Addiction Treatment from Social Media: A Similarity Network-Based Deep Learning Approach. *International Conference on Information Systems (ICIS)* 2019. Munich, Germany.

\***Xie, J.**, Liu, X., Zeng, D., and Fang, X. (2019). Understanding Medication Nonadherence from Social Media: A Sentiment-Enriched Deep Learning Approach. *Conference on Information Systems and Technology (CIST)* 2019. Seattle, USA.

\***Xie, J.**, Zhang, Z., Liu, X., and Zeng, D. (2019). Discovering Barriers to Opioid Addiction Treatment Using Similarity Network-Based Deep Learning. *China Summer Workshop on Information Management (CSWIM)* 2019. Shenzhen, China.

\***Xie, J.**, Liu, X., Zeng, D., and Fang, X. (2019). Understanding Medication Nonadherence Using Sentiment-Enriched Deep Learning. *China Summer Workshop on Information Management (CSWIM)* 2019. Shenzhen, China.

\***Xie, J.**, Zhang, Z., Liu, X., and Zeng, D. (2019). Understanding Opioid Addiction with Similarity Network-Based Deep Learning. *International Conference for Smart Health (ICSH)* 2019. Shenzhen, China.

\***Xie, J.**, Liu, X., Zeng, D., and Fang, X. (2019). Extracting Medication Nonadherence Reasons with Sentiment-Enriched Deep Learning. *International Conference for Smart Health (ICSH)* 2019. Shenzhen, China.

- **Best Paper Runner-Up**

\***Xie, J.** and Zhang, B. (2018). Readmission Risk Prediction for Patients with Heterogeneous Hazard: A Trajectory-Aware Deep Learning Approach. *International Conference on Information Systems (ICIS)* 2018. San Francisco, USA.

\***Xie, J.**, Zhang, B., and Zeng, D. (2018). Write Like a Pro or Amateur? The Effect of Online Caregiver Forum Writing Professionalism. *Conference on Information Systems and Technology (CIST)* 2018. Phoenix, USA.

- \***Xie, J.**, Liu, X., Zeng, D., and Fang, X. (2018). Discovering Medication Nonadherence Reasons with Sentiment-Enriched Deep Learning Approach. *INFORMS Workshop on Data Science* 2018. Phoenix, USA.
- \***Xie, J.**, Zhang, B., and Zeng, D. (2018). Predicting Hospital Readmission Risk Using Trajectory-Based Deep Learning Approach. *INFORMS Workshop on Data Science* 2018. Phoenix, USA.
- Xie, J.**, Zhang, B., and Zeng, D. (2018). Readmission Prediction Using Trajectory-Based Deep Learning Approach. *International Conference for Smart Health (ICSH)* 2018. Wuhan, China.  
– **Best Paper Runner-Up**
- \***Xie, J.**, Zhang, B., and Zeng, D. (2018). Predicting Hospital Readmission Risk Using Trajectory-Based Deep Learning Approach. *Conference on Health IT and Analytics (CHITA)* 2018. Washington, D.C., USA.
- \***Xie, J.**, Liu, X., Zeng, D., and Fang, X. (2018). Discovering Medication Nonadherence Reasons with Sentiment-Enriched Deep Learning Approach. *Conference on Health IT and Analytics (CHITA)* 2018. Washington, D.C., USA.
- Xie, J.**, Zhang, B., and Zeng, D. (2018). Predicting Hospital Readmission with Deep Learning. *China Summer Workshop on Information Management (CSWIM)* 2018. Qingdao, China.
- \***Xie, J.**, Liu, X., Zeng, D., and Fang, X. (2017). Understanding Reasons for Medication Nonadherence: An Exploration in Social Media Using Sentiment-Enriched Deep Learning Approach. *International Conference on Information Systems (ICIS)* 2017. Seoul, South Korea.
- [Pre-Ph.D.] **Xie, J.**, Zhu, W., and Wang, K. (2015). Consumers' Purchase Intention of Online Product Customization Using Different Terminals with/without Default Template. *International Conference on HCI in Business* 2015. Los Angeles, USA.
- [Pre-Ph.D.] \***Xie, J.**, Zhu, W., and Wang, K. (2014). An Improvement to E-commerce Recommendation Using Product Network Analysis. *Pacific-Asia Conference on Information Systems (PACIS)* 2014. Chengdu, China.

## INVITED TALKS

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- 2019 Center for Management Innovations in Healthcare, The University of Arizona.
- 2018 INFORMS Session: Using Long Short-Term Memory to Predict Hospital Readmission, Phoenix, USA.
- 2017 INFORMS Session: Understanding Reasons for Medication Nonadherence: An Exploration in Social Media Using Sentiment-Enriched Deep Learning Approach, Houston, USA.
- 2016 INFORMS Session: Mining E-cigarette Adverse Events in Social Media Using Bi-LSTM Recurrent Neural Network with Word Embedding Representation, Nashville, USA.
- 2015 Renmin Business School, Renmin University.

## SELECTED AWARDS AND HONORS

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- 2019 **Doctoral Consortium Fellow, International Conference on Information Systems (ICIS)**
- 2019 Doctoral Consortium Fellow, Americas Conference on Information Systems (AMCIS)
- 2019 James F. LaSalle Teaching Excellence Award, The University of Arizona
- 2019 Best Paper Runner-Up, International Conference for Smart Health (ICSH)
- 2018 Doctoral Consortium Fellow, Conference on Health IT and Analytics (CHITA)
- 2018 Best Paper Runner-Up, International Conference for Smart Health (ICSH)
- 2015 Nunamaker-Chen MIS Doctoral Scholarship, The University of Arizona
- 2015 Graduated with Honors, Renmin University
- 2012 Renmin University Scholarship of Excellent Academic Performance

## GRANT WRITING EXPERIENCE

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- 2017 NIH Grant. “A Social Media-Based Surveillance Platform for Opioid Research” (\$3.3M). My Role: Assisting Grant Writer.
- 2016 DHS Grant. “DHS Center of Excellence for Homeland Security Quantitative Analysis” (\$40M). My Role: Assisting Grant Writer.

## TEACHING EXPERIENCE

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### **Instructor**, The University of Arizona

- MIS 111: Computers & Internetnetworked Society (Summer 2018)
  - \* **Teacher-course evaluation: 4.8 / 5.0**
  - \* **James F. LaSalle Teaching Excellence Award**
  - \* Class size: 33
- Introduction to Data Science (Fall 2018)
  - \* Master’s level mini course
  - \* Class size: 52

### **Guest Lecturer**, The University of Arizona

- MIS 611A: Design Science Methodologies (Fall 2017, Fall 2016)

### **Teaching Assistant**, The University of Arizona

- MIS 507: Software Design and Integration (Fall 2016, Fall 2015)

### **Certificate in College Teaching**, The University of Arizona

## PROFESSIONAL EXPERIENCE

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2015 - Present	Research Associate, Eller College of Management, The University of Arizona
2014 - 2015	Research Assistant, Renmin Business School, Renmin University
2014	Data Analyst, NetEase Inc. (NASDAQ: NTES), Beijing, China
2013	Data Analyst, Bank of China, Hunan, China
2013	Voluntary Math Teacher, Nairobi, Kenya
2012	Voluntary English Teacher, Luoyang, China

## ACADEMIC SERVICE

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### Session Chair

- *INFORMS Annual Meeting (2018, 2017)*

### Journal Reviewer

- *ACM Transactions on Management Information Systems (TMIS)*
- *Information & Management*
- *IEEE Intelligent Systems*

### Conference Reviewer

- *International Conference on Information Systems (ICIS 2019, 2016)*
- *Pacific-Asia Conference on Information Systems (PACIS 2019)*
- *INFORMS Workshop on Data Science (DS 2018)*
- *Conference on Information Systems and Technology (CIST 2018)*
- *China Summer Workshop on Information Management (CSWIM 2018)*
- *European Conference on Information Systems (ECIS 2018)*
- *International Joint Conference on Artificial Intelligence (IJCHI 2016)*

## SELECTED GRADUATE COURSEWORK

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### MIS

- |   |                  |
|---|------------------|
| – Design Science Research Methodologies | by Daniel Zeng   |
| – Economics of Information Systems      | by Mingfeng Lin  |
| – Behavioral Research Methodologies     | by Sue Brown     |
| – Readings in MIS                       | by Jay Nunamaker |
| – Models for Quantitative Analysis      | by Moshe Dror    |
| – Database Management                   | by Faiz Currim   |

### Machine Learning

- |   |                     |
|---|---------------------|
| – Introduction to Machine Learning        | by Clayton Morrison |
| – Statistical Natural Language Processing | by Sandiway Fong    |

- Statistical Machine Learning
- Advanced Computational Linguistics
- Computational Linguistics
- Statistical Foundations of Machine Learning
- Topics in Data and Web Mining

by Helen Zhang  
 by Sandiway Fong  
 by Sandiway Fong  
 by Junming Yin  
 by Hsinchun Chen

### Econometrics

- Econometrics
- Applied Econometric Analysis

by Tiemen Woutersen  
 by Satheesh Aradhyula

### College Teaching

- Learner-Centered Teaching
- College Teaching Practice

by Erin Doktor  
 by Erin Doktor

### SKILLS

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Language	English, Mandarin
Deep Learning	TensorFlow, Keras, Theano
Programming	Python, Java, R, C
Analytics	Stata, SAS, PLS, SPSS
Database	MySQL, Oracle
Web Development	HTML5, CSS, Dreamweaver

### AFFILIATIONS

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Association for Information Systems (AIS)

The Institute for Operations Research and the Management Sciences (INFORMS)

### REFERENCES

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**Daniel Zeng**, Ph.D. (Dissertation Committee Chair)

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Fellow of AAAS & IEEE  
 Professor of MIS, Eller College of Management  
 The University of Arizona  
 Editor in Chief, ACM Transactions on MIS  
 President, IEEE ITS Society (2016 - 2017)

**Sue Brown**, Ph.D. (Dissertation Committee Member, Co-author)

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AIS Fellow  
 APS Professor of MIS  
 MIS Department Head, Eller College of Management  
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