JIAHENG XIE

Eller College of Management
University of Arizona
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EDUCATION

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

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

University of Arizona, Graduate College — 2017 - 2018
- Certificate in College Teaching
- 10-credit Graduate Certificate Program

RESEARCH INTERESTS

Methods: Deep Learning, Data Mining, Text Mining, Machine Learning
Domains: Business Analytics, Health Risk Analytics, Wearable Sensor Technology, Cybersecurity
Data: Clinical Claims, Wearable Sensor Signal, Social Media

DISSERTATION

Title: Big Data-Based Health Risk Analytics: A Deep Learning Approach
Committee: Daniel Zeng (Chair), Hsinchun Chen (Member), Sue Brown (Member)

PUBLISHED JOURNAL ARTICLES

1. **Xie, J.**, Liu, X., and Zeng, D. 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.

2. **Xie, J.**, Zeng, D. 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

3. **Xie, J.**, Liu, X., Zeng, D. D., and Fang, X. Understanding Medication Nonadherence from Social Media: A Sentiment-Enriched Deep Learning Approach. *Under **2nd round review at MIS Quarterly***.

4. **Xie, J.**, Zhang, B., Ma, J., Zeng, D. D., and Lo-Ciganic, J. Readmission Prediction for Patients with Heterogeneous Hazard: A Trajectory-Based Deep Learning Approach. *Revising for **2nd round review at Information Systems Research***.
   - **Best Paper Runner-Up**, *International Conference for Smart Health (ICSH)*, 2018
   - SSRN top ten download list for: *Uncertainty & Risk Modeling eJournal; Health Economics eJournal; Search, Learning & Information Costs, & Behavior of Economic Agents eJournal; Microeconomics: Decision-Making under Risk & Uncertainty eJournal*

5. **Xie, J.**, Zhang, B., Brown, S. A., and Zeng, D. D. Write Like a Pro or an Amateur? The Effect of Medical Language Formality in Senior Care: A Multi-Method Approach. *Under review at **Information Systems Research***.
   - Selected for MISQ author workshop
   - SSRN top ten download list for: Geriatrics eJournal

6. **Xie, J.**, Zhang, Z., Liu, X., and Zeng, D. D. Discovering Barriers to Opioid Addiction Treatment from Social Media: A Similarity Network-Based Deep Learning Approach. *Under review at **Information Systems Research***.

7. **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

8. Ebrahimi, M., **Xie, J.**, Chen, W., and Chen, H. The Impact of FBI Shutdown on Product Sales in Dark Net Market: A Natural Experiment. *Under final preparation for submission to **MIS Quarterly***.

WORKING PAPERS

9. **Xie, J.**, Liu, X., and Zeng, D. D. Bridging the Vocabulary Gap in Online Knowledge Community: A Graph Convolutional Network Approach. *Drafting, targeted at **Information Systems Research***.

10. **Xie, J.** and Zeng, D. D. Predicting Parkinson's Disease Risk Using Wearable Sensor Data: A Multi-View Attention Convolutional Neural Network Approach. *Model construction, targeted at **Information Systems Research***.

11. **Xie, J.**, Zhang, Z., and Zeng, D. D. Modeling Parkinson's Disease Progression Using Wearable Sensor Data: A Generative Adversarial Network Approach. *Model construction, targeted at **MIS Quarterly***.

12. **Xie, J.**, Zeng, D. D., and Lo-Ciganic, J. Predicting Opioid Overdose Using Large-Scale Medicare Data: A Recurrent Neural Networks Approach. *Model construction, targeted at* ***Journal of the American Medical Association (JAMA)***.

13. **Xie, J.**, Zhan, Y., Zeng, D. D., and Lo-Ciganic, J. Predicting Prescription Opioid Misuse Using Deep Multi-Task Learning. *Data analysis, targeted at* ***Proceedings of the National Academy of Sciences (PNAS)***.

CONFERENCE PROCEEDINGS AND WORKSHOPS (* PRESENTING AUTHOR)

1. ***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.

2. ***Xie, J**., Liu, X., Zeng, D. 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.

3. ***Xie, J.**, Liu, X., Zeng, D. D., and Fang, X. (2018). Discovering Medication Nonadherence Reasons with Sentiment-Enriched Deep Learning Approach. ***INFORMS Workshop on Data Science** 2018*. Phoenix, USA.

4. ***Xie, J.**, Zhang, B., and Zeng, D. D. (2018). Predicting Hospital Readmission Risk Using Trajectory-Based Deep Learning Approach. ***INFORMS Workshop on Data Science** 2018*. Phoenix, USA.

5. ***Xie, J.**, Zhang, B, and Zeng, D. 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.

6. **Xie, J.**, Zhang, B., and Zeng, D. D. (2018). Readmission Prediction Using Trajectory-Based Deep Learning Approach. *International Conference for Smart Health (**ICSH**) 2018.* Wuhan, China.
   - **Best Paper Runner-Up**

7. ***Xie, J.**, Zhang, B., and Zeng, D. D. (2018). Predicting Hospital Readmission Risk Using Trajectory-Based Deep Learning Approach. *Conference on Health IT and Analytics (**CHITA**) 2018.* Washington, D.C., USA.

8. ***Xie, J.**, Liu, X., Zeng, D. 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.

9. **Xie, J.**, Zhang, B., and Zeng, D. D. (2018). Predicting Hospital Readmission with Deep Learning. *China Summer Workshop on Information Management (**CSWIM**) 2018.* Qingdao, China.

10. **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.

11. ***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

1. Center for Management Innovations in Healthcare, University of Arizona, Mar 2019.

2. INFORMS Session: Using Long Short-Term Memory to Predict Hospital Readmission, Phoenix, USA, Nov 2018.

3. INFORMS Session: Understanding Reasons for Medication Nonadherence: An Exploration in Social Media Using Sentiment-Enriched Deep Learning Approach, Houston, USA, Nov 2017.

4. INFORMS Session: Mining E-cigarette Adverse Events in Social Media Using Bi-LSTM Recurrent Neural Network with Word Embedding Representation, Nashville, USA, Nov 2016.

5. Renmin Business School, Renmin University, May 2015.

GRANT WRITING EXPERIENCE

1. **Grant Title**: A Social Media-Based Surveillance Platform for Opioid Research. **Funding Amount**: $3.3 M. **Funding Source**: National Institutes of Health. **Role**: Assisting Grant Writer. **Status**: Not Funded. **Year**: 2017.

2. **Grant Title**: DHS S&T Center of Excellence for Homeland Security Quantitative Analysis. **Funding Amount**: $40 M. **Funding Source**: Department of Homeland Security. **Role**: Assisting Grant Writer. **Status**: Not Funded. **Year**: 2016.

TEACHING EXPERIENCE

Instructor

University of Arizona, MIS 111: Computers & Internetworked Society — Summer 2018
- **Teaching course evaluation: 4.8 / 5.0**
- Class size: 33

University of Arizona, Introduction to Data Science — Fall 2018
- Master's level mini course
- Class size: 52

Teaching Certificate

University of Arizona, Certificate in College Teaching — 2018

Guest Lecturer

University of Arizona, MIS 611A: Design Science Methodologies — Fall 2017
- Ph.D. research seminar

University of Arizona, MIS 611A: Design Science Methodologies — Fall 2016
- Ph.D. research seminar

Teaching Assistant

University of Arizona, MIS 507: Software Design and Integration — Fall 2016
- Master's level course

University of Arizona, MIS 507: Software Design and Integration — Fall 2015
- Master's level course

AWARDS AND HONORS

2019	James F. LaSalle Teaching Excellence Award
2018	CHITA Doctoral Consortium Fellow
2018	Best Paper Runner-Up, ICSH 2018
2018	SSRN Top 10% Author by Total Downloads
2018	Selected for Pre-AMIS MISQ Author Development Workshop
2015	Nunamaker-Chen MIS Doctoral Scholarship (Awarded to two Ph.D. students each year)
2015	Honored Graduate of Renmin University
2012	Renmin University Scholarship of Excellent Academic Performance
2012	Renmin University Scholarship of Extracurricular Activities
2012	Merit Student of Renmin University

PROFESSIONAL EXPERIENCE

2015 - Present	Research Associate, University of Arizona	Tucson, USA
2014 - 2015	Research Assistant, Renmin University	Beijing, China
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

Session Chair
- *INFORMS Annual Meeting (2017, 2018)*

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

Conference Reviewer

- *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 Conference on Information Systems (ICIS 2016)*
- *International Joint Conference on Artificial Intelligence (IJCHI 2016)*

SELECTED GRADUATE COURSEWORK

MIS: Enterprise Database Management, Design Science Research Methodologies, Behavioral Research Methodologies, Economics of Information Systems, Readings in MIS, Models for Quantitative Analysis

Machine Learning & Text Mining: Introduction to Machine Learning, Statistical Natural Language Processing, Statistical Machine Learning, Advanced Computational Linguistics, Computational Linguistics, Statistical Foundations of Machine Learning, Topics in Data and Web Mining

Econometrics: Econometrics, Applied Econometric Analysis

College Teaching Certificate: Learner-Centered Teaching, College Teaching Practice

SKILLS

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

Association for Information Systems (AIS)
The Institute for Operations Research and the Management Sciences (INFORMS)
Information Systems Society (ISS)

REFERENCES

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

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2. **Sue Brown**, Ph.D. (Dissertation Committee Member, Co-author)
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1130 E. Helen St., McClelland Hall 430Q
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3. **Xiao Fang**, Ph.D. (Co-author)
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