

XIAO QIN

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RESEARCH INTEREST

My broad research interests include data mining, big data analytics and information management.

EDUCATION

- Ph.D. Candidate**, Computer Science 2013 – Present
Worcester Polytechnic Institute, Worcester, MA, USA.
Advisor: Dr. Elke A. Rundensteiner
- Master of Science**, Information Sciences 2011
University of Pittsburgh, Pittsburgh, PA, USA.
Advisor: Dr. Daqing He
- Bachelor of Engineer**, Computer Science & Technology 2009
Harbin Institute of Technology, Harbin, Heilongjiang, China.

PUBLICATION

- **Xiao Qin**, Lei Cao, Elke Rundensteiner and Samuel Madden. *Scalable Kernel Density Estimation-based Local Outlier Detection over Large Data Streams*. (Under review in **ICDE** '18.)
- Tabassum Kakar, **Xiao Qin**, Susmitha Wunnava, Brian McCarthy, Andrew Schade, Huy Quoc Tran, Brian Zylich, Elke A. Rundensteiner, Lane Harrison, Sanjay K. Sahoo and Suranjan De. *DEVES: Interactive Signal Analytics for Drug Safety*. (Under review in **CIKM** '18.)
- 1. Susmitha Wunnava, **Xiao Qin**, Tabassum Kakar, Xiangnan Kong, Elke Rundensteiner, Sanjay Sahoo and Suranjan De. *Multi-Layered Learning for Information Extraction from Adverse Drug Event Narratives*. (To appear in **Communications in Computer and Information Science**.)
- 2. Susmitha Wunnava, **Xiao Qin**, Tabassum Kakar, Elke A. Rundensteiner and Xiangnan Kong. *Deep Learning Strategies for the Automatic Detection of Medication and Adverse Drug Events from Electronic Health Records*. **AMIA** '18.
- 3. Susmitha Wunnava, **Xiao Qin**, Tabassum Kakar, Elke A. Rundensteiner and Xiangnan Kong. *Bidirectional LSTM-CRF for Adverse Drug Event Tagging in Electronic Health Records*. **MADE** workshop 18', PMLR 90:48-56.
- 4. **Xiao Qin**, Tabassum Kakar, Susmitha Wunnava, Brian McCarthy, Andrew Schade, Huy Quoc Tran, Brian Zylich, Elke A. Rundensteiner, Lane Harrison, Sanjay K. Sahoo and Suranjan De. *Multi-Drug Adverse Reactions Analytics*. **ICDE** '18.
- 5. Susmitha Wunnava, **Xiao Qin**, Tabassum Kakar, Xiangnan Kong, Elke Rundensteiner, Sanjay Sahoo and Suranjan De. *One Size Does Not Fit All: An Ensemble Approach Towards Information Extraction from Adverse Drug Event Narratives*. **HEALTHINF** '18, 176-188.
- 6. **Xiao Qin**, Tabassum Kakar, Susmitha Wunnava, Elke Rundensteiner and Lei Cao. *MARAS: Signaling Multi-Drug Adverse Reactions*. **KDD** '17, 1615-1623.
- 7. Susmitha Wunnava, **Xiao Qin**, Tabassum Kakar, Vimig Socrates, Amber Wallace and Elke Rundensteiner. *Towards Transforming FDA Adverse Event Narratives into Actionable Structured Data for Improved Pharmacovigilance*. **SAC** '17, 777-782.
- 8. **Xiao Qin**, Ramoza Ahsan, Xika Lin, Elke Rundensteiner, and Matthew Ward. *Interactive Temporal Association Analytics*. **EDBT** '16, 197-208.

9. **Xiao Qin**, Zhongqiang Chen, Yuan Zhang and Shenhong Zhu. *Death Hoax Detection in Query Suggestions*. **Yahoo! Tech Pulse** '15.
10. **Xiao Qin**, Ramoza Ahsan, Xika Lin, Elke Rundensteiner, and Matthew Ward. *iPARAS: Incremental Construction of Parameter Space for Online Association Mining*. **BigMine** '14, JMLR 36 :149-165.
11. Amin Teymorian, **Xiao Qin**, and Ophir Frieder. *RESQ: Rank-Energy Selective Query Forwarding for Distributed Search Systems*. **CIKM** '12, 2579-2582.
12. Dongping Gao, Zhendong Niu, Lening Lv, Peng Jiang, **Xiao Qin**, and Jiahong Guo. *Chinese Unknown Word Recognition Based on Functional Applications of Type Theory*. **IITA** '08, 3 :498-502.

TALK/POSTER

- *Topically-Coherent Neural Language Model Conditioned on Arbitrary Features*. New England Machine Learning Day (NEML). Microsoft Research New England, Cambridge, MA. May 7, 2018.
- *Kernel Density Estimation-based Local Outlier Detection over High Volume Data Streams*. New England Database Day (NEDBD). MIT, Cambridge, MA. Jan 19, 2018.
- *Density-based Outlier Detection over Data Stream*. Graduate Research Innovation Exchange (GRIE). WPI, Worcester, MA. Apr 11, 2017.
- *Text Mining From Drug Surveillance Report Narratives*. The 5th Annual Community Engagement and Research Symposium. Umass Medical School, Worcester, MA. Mar 25, 2016.
- *Towards Pharmacovigilance Using Machine Learning To Identify Unknown Adverse Reactions Triggered By Drug-Drug Interaction*. The 5th Annual Community Engagement and Research Symposium. Umass Medical School, Worcester, MA. March 25, 2016.
- *Interactive Temporal Association Analytics*. Graduate Research Innovation Exchange (GRIE). WPI, Worcester, MA. Apr 11, 2016.
- *EPSTAR: An Evolving Parameter Space Framework for Interactive Temporal Association Rule Mining*. New England Database Summit (NEDB). MIT, Cambridge, MA. Jan 30, 2015.
- *Evolving Parameter Space Framework for Interactive Temporal Association Mining*. Graduate Research Innovation Exchange (GRIE). WPI, Worcester, MA. Dec 10, 2014.
- *IncPARAS: An Incremental Parameter Space Load Pipeline for Interactive Association Mining*. Graduate Research Innovation Exchange (GRIE). WPI, Worcester, MA. Mar 19, 2014.
- *IncPARAS: An Incremental Parameter Space Load Pipeline for Interactive Association Mining*. New England Database Summit (NEDB). MIT, Cambridge, MA. Jan 31, 2014.

EMPLOYMENT

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|---|---|
| <p>Worcester Polytechnic Institute
 <i>Teaching Assistant</i></p> <ul style="list-style-type: none"> - CS 2223: Algorithms - CS 4432: Database Systems II - CS 542: Database Management Systems | <p>8/2015 – 5/2016
 Worcester, MA</p> |
| <p>Yahoo! Search
 <i>Technical Intern III</i></p> <ul style="list-style-type: none"> · <i>Search Assist Team</i>, Manager : Shenhong Zhu, Mentor: Dr. Zhongqiang Chen - Developed data mining algorithms and pipelines for filtering query suggestions with controlled contents. | <p>5/2015 – 8/2015
 Sunnyvale, CA</p> |
| <p>Worcester Polytechnic Institute
 <i>Research Assistant</i></p> <ul style="list-style-type: none"> · <i>Database System Research Group (DSRG)</i>
 Supervisor: Dr. Elke A. Rundensteiner · <i>Data Visualization Lab (Xmdv)</i>
 Supervisor: Dr. Matthew O. Ward | <p>8/2013 – 5/2015
 Worcester, MA</p> <p>http://davis.wpi.edu:8180/DSRG/</p> <p>http://davis.wpi.edu/xmdv/</p> |

SERVICE & OTHER ACTIVITY

External Reviewer

- **KDD 18'** International Conference on Knowledge Discovery and Data Mining.
- **ICDE 16'** International Conference on Data Engineering.
- **VLDB 15',18'** International Conference on Very Large Data Bases.
- **SIGMOD 15',17',18'** International Conference on Management of Data.
- **EDBT 14',17'** International Conference on Extending Database Technology.

Conference Volunteer

- **KDD 17'** International Conference on Knowledge Discovery and Data Mining.
- **ICDE 12'** International Conference on Data Engineering.

AWARD

- 1st place in named entity recognition task in 2018 NLP challenges for detecting medication and adverse drug events from electronic health records (MADE1.0).
- HEALTHINF 18' Best Student Paper Award Runner-up.
- Oak Ridge Institute for Science and Education (**ORISE**) Fellowship. 16' – 17', 17' – 18'.
- WPI Travel Award 14', 16', 17', 18'.
- ACM SIGKDD Travel Award 17'.
- 3rd place in 2016 WPI Graduate Research and Innovation Exchange (GRIE) Poster Competition.
- Honorable mention in 2017 WPI GRIE Poster Competition.

TECHNICAL STRENGTH

Computer Languages

Python, Java, C++, Ruby, Perl, C and SQL.

Databases

Oracle, MySQL, Microsoft Access and SQL Server.

Tools

Pytorch, Hadoop, Pig, Oozie, Mahout, MatLab, Weka, Lingpipe, OpenNLP, Mallet, Lucene, Lemur , GNUPlot and ~~TEX~~.