

Yu Chen | Curriculum Vitae

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Education

Rensselaer Polytechnic Institute <i>Ph.D in Computer Science</i> GPA: 3.89/4.0	Troy, NY AUG. 2015 - AUG. 2020 (EXPECTED)
The University of Michigan-Dearborn <i>Exchange student in Computer & Information Science</i>	Dearborn, MI SEP. 2014 - DEC. 2014
The University of Electronic Science and Technology of China <i>B.Eng. in Telecommunications Engineering</i> GPA: 3.98/4.0	Chengdu, China SEP. 2011 - JUL. 2015

Research & Work Experience

Graduate Research Assistant, RPI Advisor: Dr. Mohammed J. Zaki	Troy, NY MAY. 2017 - PRESENT
AI Research Intern, IBM Research Manager: Dr. Lazaros Polymenakos Designed and implemented a knowledge-based and task-oriented conversational recommendation system.	Yorktown Heights, NY MAY. 2018 - AUG. 2018
Graduate Teaching Assistant, RPI	Troy, NY AUG. 2015 - MAY. 2017
Research Assistant in Virtual Engineering Lab, UM-Dearborn Advisor: Dr. Jie Shen Designed and implemented a fast voxel-based surface propagation method for outlier removal in laser measurement.	Dearborn, MI SEP. 2014 - DEC. 2014
Research Assistant in Web Sciences Center, UESTC Advisor: Dr. Tao Zhou Discovered interesting human behavior patterns with temporal dynamics in social networks.	Chengdu, China MAY. 2014 - JUL. 2014

Projects

Personalized Search and Recommendation for Health Empowerment <i>Rensselaer Polytechnic Institute, Advisor: Dr. Mohammed J. Zaki</i> Designed and developed a novel knowledge-based Q&A system for personalized food search and recommendation.	Troy, NY MAY. 2017 - PRESENT
Graph Learning for Graph Neural Networks <i>Rensselaer Polytechnic Institute, Mentor: Dr. Lingfei Wu</i> Designed and developed a novel iterative deep graph learning method for graph neural networks.	Troy, NY JUN. 2019 - SEP. 2019
Natural Question Generation <i>Rensselaer Polytechnic Institute, Mentor: Dr. Lingfei Wu</i> Designed and developed a reinforcement learning based graph-to-sequence model for natural question generation.	Troy, NY MAR. 2019 - MAY. 2019
Conversational Machine Comprehension <i>Rensselaer Polytechnic Institute, Mentor: Dr. Lingfei Wu</i> Designed and developed a system for conversational machine comprehension via recurrent graph neural networks.	Troy, NY DEC. 2018 - FEB. 2019
Comparative Text Analytics via Topic Modelling in Banking <i>Rensselaer Polytechnic Institute, Advisor: Dr. Mohammed J. Zaki</i> Designed and developed a novel topic modelling approach to predict bank failures using a large set of SEC filings.	Troy, NY FEB. 2017 - JUL. 2017
Text Analytics via Topic Modelling and Text Representation <i>Rensselaer Polytechnic Institute, Advisor: Dr. Mohammed J. Zaki</i>	Troy, NY AUG. 2016 - FEB. 2017

Designed and developed a novel autoencoder-based system for text analytics via competitive learning.

Unsupervised Cluster Labeling

Troy, NY

Rensselaer Polytechnic Institute, Advisor: Dr. [Heng Ji](#)

OCT. 2016 - DEC. 2016

Designed and developed a novel unsupervised algorithm for automatic cluster labeling.

Honors & Awards

Student Travel Award of SIGKDD 2017

ACM SIGKDD

JUL. 2017

The First-Class People's Scholarship

The University of Electronic Science and Technology of China

2012 - 2013 & 2013 - 2014

National Scholarship

Ministry of Education of China, Top 1.6 %

2011 - 2012

Skills

Research: Machine Learning, Deep Learning, Natural Language Processing, Data Mining

Programming: PYTHON = C/C++ > MATLAB > R = JAVASCRIPT = PHP

Software: PyTorch, TensorFlow, Keras, Linux, MacOS, Database, Git

Publications

Preprints.....

1. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki, Iterative Deep Graph Learning for Graph Neural Networks. Under review.
2. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki, GraphFlow: Exploiting Conversation Flow with Graph Neural Networks for Conversational Machine Comprehension. Under review.

Conference Publications.....

1. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki, Reinforcement Learning Based Graph-to-Sequence Model for Natural Question Generation. In *Proceedings of the 8th International Conference on Learning Representations (ICLR 2020)*, Addis Ababa, Ethiopia, Apr 26-30, 2020.
2. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki, Deep Iterative and Adaptive Learning for Graph Neural Networks. In *AAAI 2020 Workshop on Deep Learning on Graphs: Methodologies and Applications (AAAI DLGMA 2020)*, New York, NY, Feb 7-12, 2020.
3. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki, Natural Question Generation with Reinforcement Learning Based Graph-to-Sequence Model. In *NeurIPS 2019 workshop on Graph Representation Learning (NeurIPS GRL 2019)*, Vancouver, BC, Canada, Dec 8-14, 2019.
4. Steven Haussmann, **Yu Chen**, Oshani Seneviratne, Nidhi Rastogi, James Codella, Ching-Hua Chen, Deborah McGuinness, Mohammed J. Zaki. FoodKG Enabled Q&A Application. In *Proceedings of the 18th International Semantic Web Conference (ISWC 2019)*, Auckland, New Zealand, Oct 26-30, 2019.
5. Steven Haussmann, Oshani Seneviratne, **Yu Chen**, Yarden Ne'eman, James Codella, Ching-Hua Chen, Deborah L. McGuinness and Mohammed J. Zaki. FoodKG: A Semantics-Driven Knowledge Graph for Food Recommendation. In *Proceedings of the 18th International Semantic Web Conference (ISWC 2019)*, Auckland, New Zealand, Oct 26-30, 2019.
6. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki. GraphFlow: Exploiting Conversation Flow with Graph Neural Networks for Conversational Machine Comprehension. In *ICML 2019 Workshop on Learning and Reasoning with Graph-Structured Representations (ICML LRG 2019)*, Long Beach, CA, June 9-15, 2019.
7. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki. Bidirectional Attentive Memory Networks for Question Answering over Knowledge Bases. In *Proceedings of the 2019 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT 2019)*, Minneapolis, MN, June 2-7, 2019. Long Oral Paper.
8. **Yu Chen**, Rhaad M. Rabbani, Aparna Gupta and Mohammed J. Zaki. Comparative Text Analytics via Topic Modeling in Banking. In *Proceedings of the 2017 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2017)*, Hawaii, USA, Nov 27-Dec 1, 2017.
9. **Yu Chen** and Mohammed J. Zaki. KATE: K-competitive Autoencoder for Text. In *Proceedings of the 23rd International Conference on Knowledge Discovery and Data Mining (ACM SIGKDD 2017)*, Halifax, NS, Canada, Aug 13-17, 2017. Full Oral Paper. Acceptance rate=8.6% (64 out of 748).
10. **Yu Chen**, Hao Chen and Jie Shen. Fast Voxel-based Surface Propagation Method for Outlier Removal. In *Proceedings of the 13th International CAD Conference (CAD 2016)*, Vancouver, BC, Canada, June 27-29, 2016.

Journal Publications.....

1. Hao Chen, **Yu Chen**, Xu Zhang, Baiyuan Li, Xiaoqiang Liu, Xuefei Shi and Jie Shen. A Fast Voxel-based Method for Outlier Removal in Laser Measurement. In *International Journal of Precision Engineering and Manufacturing (IJPEM)*, 2019.

Patents

1. Lingfei Wu, **Yu Chen**, Mohammed J. Zaki. Method and System for Iterative Deep Graph Learning for Graph Neural Networks. To be filed.
2. Lingfei Wu, **Yu Chen**, Mohammed J. Zaki. Method and System for Natural Question Generation via Reinforcement Learning Based Graph-to-Sequence Model. To be filed.
3. Lingfei Wu, **Yu Chen**, Mohammed J. Zaki. Method and System for Conversational Machine Reading Comprehension via Graph Neural Networks. Filed, Aug 2019.

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