Yu Chen | Curriculum Vitae

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LinkedIn: linkedin.com/in/whatshugo

Education

Rensselaer Polytechnic Institute	**Troy, NY**
Ph.D in Computer Science	Aug. 2015 - May. 2020 (expected)
The University of Michigan-Dearborn	**Dearborn, MI**
Exchange student in Computer & Information Science	Sep. 2014 - Dec. 2014
The University of Electronic Science and Technology of China	**Chengdu, China**
B.Eng. in Telecommunications Engineering	Sep. 2011 - Jul. 2015

Research & Work Experience

Graduate Research Assistant, RPI　　　　　　　　　　　　　　　　　　**Troy, NY**
Advisor: Prof. Mohammed J. Zaki　　　　　　　　　　　　　　　May. 2017 - Present

AI Research Intern, IBM Research　　　　　　　　　　　　**Yorktown Heights, NY**
Manager: Dr. Lazaros Polymenakos　　　　　　　　　　　　May. 2018 - Aug. 2018
Designed and implemented a knowledge-based and task-oriented conversational recommendation system.

Graduate Teaching Assistant, RPI　　　　　　　　　　　　　　　　　　**Troy, NY**
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Aug. 2015 - May. 2017

Python Web Developer Intern at Microoh　　　　　　　　　　　**Chengdu, China**
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Mar. 2015 - May. 2015
Implemented a personalized learning management system for online education.

Research Assistant in the Virtual Engineering Lab, UM-Dearborn　　**Dearborn, MI**
Advisor: Prof. Jie Shen　　　　　　　　　　　　　　　　　　Sep. 2014 - Dec. 2014
Designed and implemented a fast voxel-based surface propagation method for outlier removal in laser measurement.

Research Assistant in the Web Sciences Center, UESTC　　　　　**Chengdu, China**
Advisor: Prof. Tao Zhou　　　　　　　　　　　　　　　　　　May. 2014 - Jul. 2014
Discovered interesting human behavior patterns with temporal dynamics in social networks.

Projects

Personalized Search and Recommendation for Health Empowerment　　**Troy, NY**
Rensselaer Polytechnic Institute, Advisor: Prof. Mohammed J. Zaki　May. 2017 - Present
Designed and developed a novel deep learning-based Q&A system for personalized food search and recommendation.

Graph Learning for Graph Neural Networks　　　　　　　　　　　　**Troy, NY**
Rensselaer Polytechnic Institute, Mentor: Dr. Lingfei Wu　　Jun. 2019 - Sep. 2019
Designed and developed a novel iterative deep graph learning method for graph neural networks.

Natural Question Generation　　　　　　　　　　　　　　　　　　**Troy, NY**
Rensselaer Polytechnic Institute, Mentor: Dr. Lingfei Wu　　Mar. 2019 - May. 2019
Designed and developed a reinforcement learning based graph-to-sequence model for natural question generation.

Conversational Machine Reading Comprehension　　　　　　　　　　**Troy, NY**
Rensselaer Polytechnic Institute, Mentor: Dr. Lingfei Wu　　Dec. 2018 - Feb. 2019
Designed and developed a system for conversational machine reading comprehension via graph neural networks.

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Text Analytics via Topic Modelling and Text Representation **Troy, NY**
Rensselaer Polytechnic Institute, Advisor: Prof. Mohammed J. Zaki Aug. 2016 - Feb. 2017
Designed and developed a novel autoencoder-based system for text analytics via competitive learning.

Publications

Preprints

1. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki, Iterative Deep Graph Learning for Graph Neural Networks.
2. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki, Reinforcement Learning Based Graph-to-Sequence Model for Natural Question Generation.
3. **Yu Chen**, Lingfei Wu and Mohammed J. Zaki, GraphFlow: Exploiting Conversation Flow with Graph Neural Networks for Conversational Machine Comprehension.

Conference Publications

1. **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-Dec 14, 2019.
2. 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-Oct. 30, 2019.
3. Steven Haussmann, Oshani Seneviratne, **Yu Chen**, Yarden NeâĂŹeman, 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-Oct. 30, 2019.
4. **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-June 15, 2019.
5. **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-June 7, 2019. Long Oral Paper.
6. **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.
7. **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, August 13-17, 2017. Full Oral Paper. Acceptance rate=8.6% (64 out of 748).
8. **Yu Chen**, Hao Chen and Jie Shen. Fast Voxel-based Surface Propagation Method for Outlier Removal. **In Proceedings of the 13th International CAD Conference**, 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**, 2019.

Patents

1. 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, 2019.
2. Lingfei Wu, **Yu Chen**, Mohammed J. Zaki. Conversation History Within Conversational Machine Reading Comprehension. Aug, 2019.

Honors & Awards

Student Travel Award of SIGKDD 2017
ACM SIGKDD Jul. 2017

Second Place at the 2016 DataThon
Rensselaer Polytechnic Institute Apr. 2016

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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: $\textsc{Python} = \text{C/C++} > \textsc{Matlab} > \text{R} = \textsc{Scheme} = \textsc{JavaScript} = \text{PHP}$

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

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