

# XUEJIAN WANG

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## EDUCATION

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### Carnegie Mellon University

Pittsburgh, USA

- Joint PhD student in Machine Learning and Public Policy
- Advisor: Prof. Leman Akoglu

Sep. 2018 - Present

### Shanghai Jiao Tong University (SJTU)

Shanghai, China

- B.S in Information Security
- Research Assistant, APEX Data & Knowledge Management Lab
- Advisor: Prof. Weinan Zhang, Prof. Yong Yu and Prof. Jun Wang(University College London)

Sep. 2014 - Jun. 2018

## RESEARCH INTERESTS

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My research interest lie in the broad areas of machine learning including deep learning and representation learning, as well as their applications in recommender systems, natural language processing and anomaly detection.

## PUBLICATIONS

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### Large-scale Interactive Recommendation with Tree-structured Policy Gradient

- Haokun Chen, Xinyi Dai, Weinan Zhang, Han Cai, **Xuejian Wang**, Ruiming Tang, Yuzhou Zhang, Yong Yu
- In *Proceedings of the 33rd AAAI Conference on Artificial Intelligence (AAAI-19)*. **AAAI, 2019**

### Neural Link Prediction over Aligned Networks

- Xuezhi Cao, Haokun Chen, **Xuejian Wang**, Weinan Zhang, and Yong Yu.
- In *Proceedings of the 32nd AAAI Conference on Artificial Intelligence (AAAI-18)*. **AAAI, 2018**

### Dynamic Attention Deep Model for Article Recommendation by Learning Human Editors' Demonstration

- **Xuejian Wang\***, Lantao Yu\*, Kan Ren, Guanyu Tao, Weinan Zhang, Yong Yu, Jun Wang.
- In *Proceedings of the 23rd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. KDD 2017*

## RESEARCH EXPERIENCES

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### Detecting Unseen Risk Class in Online Textual Data

Sep. 2018 - Present

Advisor: Prof. Leman Akoglu

DATA Lab, CMU

- Detecting emerging risk class from large corpus of text on the Internet, mainly news and twitters
- Generalizing algorithm to other similar datasets. Still ongoing

### Large-scale Interactive Recommendation via Reinforcement Learning

Dec. 2017 - April. 2018

Advisor: Prof. Weinan Zhang

APEX Data & Knowledge Management Lab, SJTU

- This study focuses on large discrete action space problem in reinforcement learning based recommender systems
- Employing a Tree-structured Policy Gradient Recommendation (TPGR) framework to accelerate sampling

### Neural Link Prediction over Aligned Networks

Aug. 2017 - Sep. 2017

Advisor: Prof. Yong Yu

APEX Data & Knowledge Management Lab, SJTU

- Implemented *LINE* in Tensorflow for comparison and tuned parameters to best performance
- Revised the whole paper and contributed over 100 submits
- Surveyed papers about social networks and proposed attention based framework which we left as future work

**Dynamic Attention Deep Model for Article Recommendation by Learning Human Editors' Demonstration** Oct. 2016 - Feb. 2017

*Advisor: Prof. Weinan Zhang*

*APEX Data & Knowledge Management Lab, SJTU*

- Built a text classification network to model the editors' underlying criterion varied with many factors such as time, current affairs, etc., for a famous Chinese media website
- Employed attention mechanism to address data drift problem, resulting in more robust and stable predictions
- Proposed a Dynamic Attention Deep Model (DADM) which outperformed other baselines in an A/B test
- Our paper was accepted to KDD 2017 and the proposed DADM model was utilized in practical cases, automating the quality article selection process to alleviate the editors' working load

**PROFESSIONAL ACTIVITIES**

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**Review Activities**

CIKM 2017, WSDM 2018, AAAI 2018, SIGIR 2018

- Gave reviews for paper submissions in relevant domains for reference, which were mostly adopted

**INTERNSHIP EXPERIENCE**

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**ULU Technologies Inc.**

Nov. 2016 - Feb. 2017

*R&D Engineer Intern*

- Developed a practical algorithm for article recommendation which is used in production
- Improved coding ability, learned how to independently conduct experiments and developed communication skills

**HONORS & AWARDS**

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**CMU Presidential Fellowship**

2018

**KDD Student Travel Award**

2017

**Rongchang Science and Technology Innovation Scholarship (Nomination)**

2017

- Top 30 undergraduate scholars in Shanghai Jiao Tong University

**SJTU Excellent Scholarship**

2017&2016

**SJTU Excellent Student Award (Top 5%)**

2017&2016

**Second Prize, China Undergraduate Mathematical Contest in Modeling 2016, Shanghai**

2016

**SKILLS**

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**Machine Learning:**

Tensorflow, XGBoost, Keras

**Programming Languages:**

Python, MATLAB, C++, R, Verilog and L<sup>A</sup>T<sub>E</sub>X

**Standard Tests:**

TOEFL: 104 (R26, L27, S22, W29) , GRE: V153, Q170, W3.5

**LEADERSHIP & EXTRACURRICULAR ACTIVITIES**

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**Student Union of School**

May 2015 - May 2016

Minister of Publicity Department

**Student Union of SJTU**

Nov. 2015 - Feb. 2016

Minister of Communication Department of the Committee

**Outstanding Volunteers**

Shanghai International Marathon (2014&2016), SJTU 120<sup>th</sup> Anniversary