

# XUEJIAN WANG

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## EDUCATION

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| <b>Carnegie Mellon University</b>  | <b>Pittsburgh, USA</b> |
| • Joint PhD student in Machine Learning(Expected) and Public Policy                        | Sep. 2018 - Present    |
| <b>Shanghai Jiao Tong University (SJTU)</b>  | <b>Shanghai, China</b> |
| B.S in Information Security  | Sep. 2014 - Jun. 2018  |
| • Research Assistant, APEX Data & Knowledge Management Lab                                 |                        |
| • Advisor: Prof. Weinan Zhang, Prof. Yong Yu and Prof. Jun Wang(University College London) |                        |

## RESEARCH INTERESTS

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I am broadly interested in developing novel deep learning models, applying them to real-world problems and understanding how it works empirically and theoretically.

## PUBLICATIONS

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- Combining Machine Learning Models and Scores Using combo library**
- Yue Zhao, **Xuejian Wang**, Cheng Cheng, Xueying Ding
  - In *Proceedings of the 34th AAAI Conference on Artificial Intelligence (AAAI-20)*. **AAAI, Demo track, 2020**
- End-to-End Continual Rare-Class Recognition with Emerging Novel Subclasses**
- Hung Nguyen, **Xuejian Wang**, Leman Akoglu
  - In *ACM Transactions on Knowledge Discovery from Data (TKDD)*, **2019**
- Continual Rare-Class Recognition with Emerging Novel Subclasses**
- Hung Nguyen, **Xuejian Wang**, Leman Akoglu
  - In **ECML PKDD, 2019**
- 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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- Continual Rare-Class Recognition with Emerging Novel Subclasses** Oct. 2018 - Apr. 2019  
*Advisor: Prof. Leman Akoglu* DATA Lab, CMU
- Detecting emerging novel classes of interest from news articles, including major classes and rare(risky) classes
  - Rejecting unseen risk class documents to one class
  - Submitted to ECML-PKDD 2019
- 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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External Reviewer

WWW Journal

## INTERNSHIP EXPERIENCE

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### Amazon.com

Jun. 2019 - Aug. 2019

Applied Scientist Intern

Advisor: Dr. Jim Huang

- Developed a customer embedding generation framework for accelerating recommender system inference
- Achieved 4x acceleration with less than 1% accuracy loss on Amazon production dataset

### 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(\$24000)	2018
SJTU Outstanding Graduate	2018
KDD Student Travel Award	2017
Rongchang Science and Technology Innovation Scholarship (Nomination)	2017
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, PyTorch, MXNet, XGBoost, Sklearn, Keras
Programming Languages:	Python, C++, MATLAB, R, Verilog and L <sup>A</sup> T <sub>E</sub> X

## 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