

# XUEJIAN WANG

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## RESEARCH INTERESTS

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The broad areas of machine learning and applications in various domains such as recommender system and network embedding. In general:

- Mining underlying patterns of human interaction and behaviors
- Developing practical machine learning algorithms and scalable tools to solve real-world problems.

## EDUCATION

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**Shanghai Jiao Tong University (SJTU), Shanghai, China**

Sep. 2014 - Jun. 2018 (expected)

School of Electronic Information and Electric Engineering

GPA:3.45/4.0

Bachelor of Science in Cyberspace Security

(Junior GPA 3.56/4.0, Ranked 18/101)

## PUBLICATIONS

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[1]**Xuejian Wang**, Lantao Yu, Kan Ren, Guanyu Tao, Weinan Zhang, Yong Yu, and Jun Wang. Dynamic attention deep model for article recommendation by learning human editors' demonstration. In *Proceedings of the 23rd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, pages 2051-2059. **KDD 2017**

[2]Xuezhi Cao, Haokun Chen, **Xuejian Wang**, Weinan Zhang, Yong Yu. Neural Link Prediction over Aligned Networks, submitted to *Proc. AAAI*, 2018

## RESEARCH EXPERIENCE

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**Personalized Article Recommendation**

Sep. 2017 - Present

Advisor: Prof. Yong Yu

APEX Data & Knowledge Management Lab, SJTU

- This study focuses on recommending most relevant textual advertisements to users to maximize the Click-Through-Rate, in which the major challenge is how to match user interests with proper articles
- Employing hierarchical attention mechanism to obtain article embeddings and construct user interests

**Neural Link Prediction over Aligned Networks**

Aug. 2017 - Sep. 2017

Advisor: Prof. Yong Yu

APEX Data & Knowledge Management Lab, SJTU

- This study explored link prediction over aligned networks, which are common in real world, yet little studied. The major challenge is the heterogeneousness of the considered networks, which could be addressed well by our proposed model.
- Implemented baseline *LINE: Large-scale Information Network Embedding* in Tensorflow and tuned parameters
- Surveyed papers about social networks and contributed lots of submits to our final paper
- Extended the idea of two aligned networks to multi-aligned networks 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

- This task is, essentially, a binary classification problem for articles, in which the major challenge is modeling the editors' underlying criterion varied with many factors such as time, current affairs, etc.
- 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

- Gave reviews for paper submissions in relevant domains for reference, which were mostly adopted
- Learnt how to evaluate academic papers from a review perspective and developed tastes for papers

## INTERNSHIP EXPERIENCE

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### ULU Technologies Inc.

Nov. 2016 - May 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
- Got a main understanding of how AI start-up works

## AWARDS

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- KDD Student Travel Award 2017
- Shanghai Jiao Tong University Excellent Scholarship 2017&2016
- Excellent Student Award (Top 5%) 2016
- Second Prize, province-level CUMCM 2016 2016
- Second Prize, “Data Bang” Data Innovation Contest (Top 2) 2015
- Outstanding Undergraduate Practical Program (Top 5%) 2015

## SKILLS

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### Machine Learning:

Tensorflow, Scikit-Learn, xGBoost, Keras

### Programming Languages:

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

## LEADERSHIP & EXTRACURRICULAR ACTIVITIES

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### SEIEE Student Union

May 2015 - May 2016

Minister of Publicity Department

### SJTU Student Union

Nov. 2015 - Feb. 2016

Minister of Communication Department of the Committee

### Outstanding Volunteers

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