

# Xiusi Chen

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## RESEARCH INTERESTS

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Data Mining, Machine Learning, Deep Learning, Graph Data Processing Systems

## EDUCATION

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### Peking University

M.S. in Computer Science

2015 - 2018(expected)

**Rank: Top 2/54**

- **Courses:** – Database Principles and Technologies: 93 – Massive Graph Data Management and Mining: 90 – Practice of Research: 90 – Deep Learning Technologies and Applications: 86
- **Fields:** Data Mining(especially Graph Mining), Database, Machine Learning, Deep Learning
- **Advisor:** Prof. Jun Gao

### Peking University

B.S. in Computer Science

2011 - 2015

- **Courses:** – Advanced Mathematics: 88 – Introduction to Database Systems(Honor Track): 88 – Set Theory and Graph Theory: 86
- **Thesis:** The Design and Implementation of Indexes on Distributed Big Graph Processing Framework
- **Advisor:** Prof. Jun Gao

### Carnegie Mellon University

Machine Learning Summer School

Summer 2014

- **Lecturer:** Tom Mitchell, Alex Smola, Quoc Le, Deepak Agarwal, Mu Li, Xavier Amatriain, etc.

## PUBLICATIONS

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**Xiusi Chen**, Qimu Zheng, Xinxi Jiang and Jun Gao, *The Design and Implementation of Index on Distributed Big Graph Systems* In Proceedings of the 34<sup>th</sup> National Database Conference(NDBC 2017). Oral.

**Xiusi Chen**, Xiaoyu Li, and Jun Gao, *Demo of a Semi-Supervised Method Based System to Detect Advertisements from QA pairs* In Proceedings of the 33<sup>rd</sup> National Database Conference(NDBC 2016). Oral.

## PREPRINTS

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**Xiusi Chen**, Xiaoyu Li, Chang Zhou and Jun Gao, *Scalable Graph Embedding Enhanced by Content-Preserving Locality Sensitive Hashing*. Submitted to AAAI'18

**Xiusi Chen**, Xiaoyu Li, Chang Zhou, Xiaofei Liu and Jun Gao, *Learning Item Embedding with Heterogeneous Information for Recommendation*. Submitted to ICDE'18

Chang Zhou, Jinze Bai, Junshuai Song, Xiaofei Liu, Zhengchao Zhao, **Xiusi Chen**, and Jun Gao, *ATRank: An Attention-Based User Behavior Modeling Framework for Recommendation*. Submitted to AAAI'18

## RESEARCH EXPERIENCE

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### Merchandise Recommendation and Serving on Taobao.com

Advisor: Prof. Jun Gao

Sept. 2016 - Present

Institute of Network Computing and Information Systems, **Peking University**

- Built a deep neural network based recommendation system.
- The system has been on production since 2016.12 and serves more than 200million users on over 300 million products per day.
- A 10% boost of CTR(click through rate) is perceived after the deployment.
- Use Locality-Sensitive Hashing to enhance graph embedding with text to improve similarity measuring under a collaborative filtering setting.
- **Paper submitted to AAAI'18 and ICDE'18.**

### Semi-Supervised Advertisement Discrimination System

Advisor: Prof. Jun Gao

Mar. 2016 - Jun. 2016

Institute of Network Computing and Information Systems, **Peking University**

- Developed semi-supervised(only positive examples are given) iterative algorithms to discriminate advertisements from normal answers in QA communities.
- Conventional machine learning methods like Logistic Regression, Random Forest, Support Vector Machine, and ensemble methods are involved.
- Invited short paper for NDBC 2016.

**The Design and Implementation of Indexes on Distributed Big Graph Processing Framework** Mar. 2015 - May 2015  
*Advisor: Prof. Jun Gao* *Institute of Network Computing and Information Systems, **Peking University***

- Investigated different indexes suiting the distributed graph processing systems.
- Implemented different types of indexes on Giraph.
- The modified Giraph support both synchronous and asynchronous execution modes.
- The proposed index mechanism brought an 18 to 70 times query execution boost.
- **Paper accepted by NDBC 2017.**

## HONORS AND AWARDS

<b>Leo KoGuan Scholarship</b> <i>top 2%, Peking University</i>	Sept. 2016
<b>Merit Student</b> <i>top 5%, Peking University</i>	Sept. 2016
<b>Graduate Student Academic Scholarship</b> <i>Peking University</i>	Sept. 2015, 2016, 2017
<b>2<sup>nd</sup> Place of National Database Conference (NDBC) Cup 2016</b> <i>Out of 566 teams, China Computer Federation</i>	Jun. 2016
<b>Kaggle State Farm Distracted Driver Detection</b> <i>Ranked top 13%(191/1440)</i>	Jul. 2016
<b>3<sup>rd</sup> Prize of 15<sup>th</sup> Peking University ACM Programming Contest</b> <i>Peking University</i>	May. 2016
<b>3<sup>rd</sup> Place of 17<sup>th</sup> Chinese University Basketball Association (CUBA) Championships, Beijing Division</b> <i>On behalf of Peking University, Federation of University Sports of China</i>	Oct. 2014
<b>6<sup>th</sup> Place of the Middle School Students Swimming Contest of Hunan Province, 100M Breaststroke</b> <i>The Education Department of Hunan Province</i>	Sept. 2010

## TEACHING EXPERIENCE

<b>Introduction to Database Systems (Honor Track)</b> <i>Teaching Assistant, Peking University</i>	Spring 2016
<b>Database Systems Principles and Technologies</b> <i>Teaching Assistant, Peking University</i>	Fall 2016

## SKILLS

<b>Programming Languages</b>	C/C++, Java, Python
<b>Web</b>	Django, Flask, Bootstrap, PHP, JavaScript, HTML
<b>Platform/Tools</b>	GNU/Linux (Ubuntu, Debian, CentOS), Mac OS, Git, GDB, Vim, SQL, LaTeX
<b>Distributed Systems</b>	Hadoop, Giraph
<b>Libraries</b>	Scikit-Learn, Keras, TensorFlow
<b>Languages</b>	Chinese (native), English (professional)