

Yuan Yuan

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Education

- 2012–2016 **B.Eng. in Computer Science**, *Tsinghua University*, Beijing, P.R. China.
GPA: 93/100 (3.9/4.0) **Rank:** 1/116
- 2013–2016 **B.Ec. in Economics**, *Tsinghua University*, Beijing, P.R. China.
Selected courses: Intermediate Microeconomics, Game Theory, Econometrics, Intermediate Macroeconomics, Principles of Finance, Accounting Principles

Research Interests

My research interest focuses primarily on **data mining**, especially its **intersection** with economics, linguistics and social sciences. Meanwhile, I am interested in **machine learning**, **natural language processing** and **information retrieval**.

Research Experience

- 2015/07-2015/11 **Big Data and Social Computing Lab**, *University of Illinois at Chicago*, IL, USA.
Advisor: Prof. Philip S. Yu
- *Opinion Spam Detection on Location-Based Social Networks*
 - Exploited multiple review websites and proposed a bi-level pipeline, macroscopic to microscopic, for opinion spam detection.
 - Designed time series patterns to detect suspicious time period and conducted experiments to demonstrate that certain patterns could indicate high suspicion.
 - Submitted to International World Wide Web Conference (WWW'16) as first author.
- 2014/11-Present **Knowledge Engineering Group**, *Tsinghua University*, Beijing, China.
Advisor: Prof. Jie Tang
- *Quality Analysis and Predication Subscription Accounts on Wechat*
 - Predicted the impact of articles proposed by subscription accounts considering account behaviors and retweet behaviors on large-scale social networks on Wechat.
 - *Arnet Miner: An Academic Search Engine*
 - Utilized word embedding to produce similar queries to extend the initial queries to increase recall of experts retrieval.
 - Built large-scale heterogeneous networks of queries, papers, authors and conferences for weight-based information retrieval.
- 2015/06-2015/07 **Institute of HCI and Media Integration**, *Tsinghua University*, Beijing, China.
Advisor: Prof. Jia Jia
- *Psychological Stress Detection on Social Media*
 - Used word embedding and SentiBank to produce new features of text and photos to increase the accuracy of psychological stress detection.
 - Incorporated social roles and relationships to the factorization machines to improve the performance of stress prediction of inactive users.
- 2014/09-2015/01 **National Engineering Laboratory of Next-Generation Internet and Interconnecting Equipment**, *Tsinghua University*, Beijing, China.
Advisor: Prof. Youjian Zhao
- *Chinese Chat platform on FPGA*
 - Proposed a typewriting to support chatting in both English and Chinese on double FPGA platforms.
 - Became the only group that successfully connected two FPGA platforms through serial communication and awarded as the best among 20 projects.

- 2014/05-2014/08 **Information Retrieval Group, Tsinghua University, Beijing, China.**
Advisor: Prof. Min Zhang
- *Long Tail Query on Search Engine*
 - Implemented a random walk with restart on large-scale heterogeneous networks of queries and documents to recommend more frequent queries for long tail queries.
 - Improved the efficiency (90% time saved) of random walk through replacing adjacency matrix with adjacency list.

- 2014/03-2014/05 **Institute of Education, Tsinghua University, Beijing, China.**
Advisor: Prof. Fengliang Li
- *Impact of Family Planning in China on Demographic Structures*
 - Constructed utility function of family birth plan with microeconomics theory and modeled family birth behavior with stochastic process.
 - Utilized Leslie matrix to predict nationwide demographic structures based on big data provided by Chinese government.
 - Presented that it was urgent for Chinese government to cancel the restriction of family birth.

Publications

- **Yuan Yuan**, Sihong Xie, Chun-ta Lu, Jie Tang and Philip S. Yu, "M-square: An Opinion Spam Detection Framework using Multi-site Temporal Sentimental Patterns", submitted to 25th International Conference on World Wide Web

Selected Honors & Awards

- 2015 **Outstanding Undergraduate Award, China Computer Federation.**
◦ Only two out of 136 students at Tsinghua University and 100 in China received this award.
- 2014 **National Scholarship of China, Ministry of Education of P.R. China.**
◦ Only three out of 144 students from Dept. Computer Science at Tsinghua University were awarded.
◦ It is the top scholarship provided by Chinese government (China)
- 2013–2015 **Singapore Technology Engineering Overseas Scholarship.**
◦ Only six out of 450 students at Tsinghua University received this award.

Programming Skills

Proficient in **C/C++**, **Java** and **Python**. Capable of **Matlab**, **Scala**, **VHDL/verilog**, **JavaScript**, **HTML/CSS**, **R**, **STATA** and **LaTeX**.

Academic Services

- 2015 **Reviewer of TKDD, Transactions on Knowledge Discovery from Data, Oct. 2015.**
- 2015 **ACM Student Member, Association for Computing Machinery.**

Voluntary services

- 2012/10-2014/06 **E-love Social Practice, Team Leader.**
◦ Negotiated with different social organizations including companies like DELL, to collect spare computers and other electronic devices
◦ Distributed the computers to three schools of children of migrant workers and helped them to set up computer labs
◦ Won prizes awarded by Tsinghua U and social organizations nationwide.
- 2013/06-2013/08 **Summer Service and Learning Program in Rural China, Team Leader.**
◦ Organized a team of ten undergraduates from mainland China, Hong Kong and USA to teach over 400 secondary students in rural China.
◦ Designed courses in psychology to encourage students to have confidence and passion about their life.