

Ke Yang

PHD CANDIDATE, COMPUTER SCIENCE, DREXEL UNIVERSITY

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EDUCATION

Ph.D. in Computer Science, Drexel University, Philadelphia, U.S.A
Advisor: Julia Stoyanovich *September, 2015 - June, 2020 (Expected)*
GPA: 3.98/4.0

M.S.E in Computer Science, Beijing Technology and Business University, Beijing, China
Advisors: Qian Mo and Zhongming Han *September, 2012 - June, 2015*
GPA: 3.51/4.0

B.Eng. in Software Engineering, Beijing Technology and Business University, Beijing, China
Advisor: Qian Mo *September, 2008 - June, 2012*
GPA: 3.45/4.0

RESEARCH INTERESTS

Responsible data and knowledge management, non-discriminatory machine learning, data and knowledge mining, and social network analysis
Currently working on interpreting fairness in ranking-related applications with the goal to mitigate the effect of discrimination toward sub-groups (externally protected by national laws)

PUBLICATIONS

Ke Yang, Julia Stoyanovich, Abolfazl Asudeh, Bill Howe, HV Jagadish, and Gerome Miklau, “A Nutritional Label for Rankings” (demo) to appear in *Proceedings of the 2018 ACM International Conference on Management of Data (SIGMOD 2018)*, Houston, USA

Julia Stoyanovich, **Ke Yang**, HV Jagadish, “Online Set Selection with Fairness and Diversity Constraints” in *Proceedings of the 21th International Conference on Extending Database Technology (EDBT 2018)*, Vienna, Austria, DOI:10.5441/002/edbt.2018.22

Ke Yang, Julia Stoyanovich, “Measuring Fairness in Ranked Outputs” in *Proceedings of the 29th International Conference on Scientific and Statistical Database Management (SSDBM 2017)*, Chicago, USA, DOI:10.1145/3085504.3085526

Zhongming Han, **Ke Yang**, Xusheng Tan, “Analyzing Spectrum Features of Weight User Relation Graph to Identify Large Spammer Groups in Online Shopping Websites” in *Chinese Journal of Computers*, 40(4): 939-954 (2017) (in Chinese), DOI:10.11897/SP.J.1016.2017.00939

Zhongming Han, **Ke Yang**, Fengmin Xu, Dagao Duan, “Probabilistic Graphical Model for Detecting Spammers in Microblog Websites” in *Journal of Embedded System*, 8(1): 12-23 (2016), DOI:10.1504/IJES.2016.073747

Qian Mo, **Ke Yang**, “Overview of Web spammer detection” in *Journal of Software*, 25(7): 1505-1526 (2014) (in Chinese), DOI:10.13328/j.cnki.jos.004617

Kai Wang, **Ke Yang**, “A method and application system of detecting web spammers” in *China Invention Patent*, (2015) (in Chinese), No. CN201510012860

RESEARCH
PROJECTS

Data, Responsibly

Supervisor: Prof. Julia Stoyanovich

December, 2015 - Present

- Encoding fair schemes in ranking-related applications and designing models to mitigate effect of bias towards sub-groups such as females in job hunting or African-American people in the prediction of criminal activities. More: [DataResponsibly](#)
- Designing diverse schemes for online set selection
- Making ranking-related decision procedures more transparent for users. Application: [RankingFacts](#)

Analyzing and Preventing Spam Information in Online Shopping Websites

Supervisors: Prof. Zhongming Han and Prof. Qian Mo

May, 2013 - May, 2015

- Analyzed the user profiles and behaviors of the large spammer groups in online shopping websites, such as Taobao.com and JD.com
- Designed a model employing graphical features extracted from users relationships to efficiently detect the large spammer groups in online shopping websites
- A survey paper accepted in Journal of Software, one of the Chinese premier peer-reviewed journal in Computer Science
- A paper accepted in Chinese Journal of Computers, one of the Chinese premier peer-reviewed journal in Computer Science
- Applied a China invention patent for the above detection model

Detecting and Predicting Hot Topics in Social Network based on Analyzing Human Behavior Pattern

Supervisor: Prof. Zhongming Han

December, 2012 - June, 2013

- Designed a new probabilistic graphical model to efficiently identify Sina Weibo spammers by combining the profiles and behaviors features from users in Sina Weibo (Chinese version of Twitter)
- Compared the performance with the baseline SVM model
- Paper accepted in Journal of Embedded System

WORK
EXPERIENCE

Intern in Elite & Resource (start-up company)

Research engineer, Supervisor: Peng Sun

November, 2014 - August, 2015

Analyzed flood disaster data from China Institute of Water Resources and Hydropower Research
Designed a model to predict the water flow rate of small watershed torrents and encoded the model as a component of national watershed data management system

AWARDS &
HONORS

Awarded **National Scholarship, 2014-2015** by Chinese Ministry of Education

Awarded **Outstanding Graduate Student Leaders, 2013** by Beijing Tech & Buss University

Awarded **Outstanding Graduates of Beijing, 2012** by Beijing Ministry of Education

Awarded **Excellent Students of Beijing, 2011** by Beijing Ministry of Education

Awarded **National Endeavor Scholarship, 2009-2011** by Chinese Ministry of Education

Awarded **Military Training Outstanding Student Leaders, 2008** by Beijing Tech & Buss University

EXTRA
INTERESTS

Start-up company founder: providing technical supports for a start-up company that aims to preserve China's cultural heritage by developing a platform to collect and disseminate information about threats to cultural heritage and to support the related services and products

Hobbies: An amateur marathon runner, an enthusiastic language learner, & an on-off traveler