Yabing Liu

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OBJECTIVE

Seeking a full-time position in the area of large-scale data analysis, data mining, online social networks, user privacy and security, network measurement

EDUCATION

Ph.D. in Computer Science　　　　　　　　　　　　　　Aug. 2010 – 2016 (expected)
Northeastern University, Boston, MA, GPA: 3.8/4.0
Thesis: *Privacy in Online Systems: Measurement, Analysis, and Implications*
Advisor: Alan Mislove

M.S. in Control Theory and Control Engineering　　　　　Sep. 2007 – Mar. 2010
Shanghai Jiao Tong University, Shanghai, China, GPA: 3.6/4.0
Thesis: *Analysis of Community Structure Detection in Complex Networks*

B.E. in Automation and Information Technology　　　　　Sep. 2003 – Jun. 2007
Donghua University, Shanghai, China, GPA: 3.6/4.0

TECHNICAL SKILLS

Languages: Python, Perl (proficient), C, Java, SQL, Matlab (experienced), Spark, R, Shell Scripts (intermediate)
Web Technologies: Javascript, PHP, Ajax (proficient), HTML, CSS (experienced)

RESEARCH EXPERIENCE

Measuring SSL Certificate Revocation in the Web's PKI　　Sep. 2014 – Oct. 2015
• Investigated the SSL certificate revocation behavior for two parties: website administrators and CAs, using 74 full IPv4 HTTPS scans with a total of 38 million certificates
• Designed and implemented a test suite to analyze web browser behavior in revocation checking, which includes 244 distinct SSL certificate configurations
• Deployed the test suite to 30 most recent versions of all major browsers on both mobile and desktop devices, published in paper [2]
• Project Link: http://www.sslresearch.org

Measuring the Evolution of Twitter Users and Behavior　　May 2013 – May 2014
• Collected and analyzed a large dataset of over 37 billion tweets spanning over seven years, with an estimated 10-15% of all public tweets and 30% of users
• Examined the changes in the Twitter ecosystem itself and analyzed the evolution of user characteristics and their tweeting behavior
• Quantified a number of trends, including the spread of Twitter across the globe, the rise of spam and malicious behavior, the shift from desktop to mobile usage, etc, published in paper [6]

Analyzing Ad Auctions and Evaluating User Value in OSNs　　Sep. 2012 – Aug. 2013
• Explored the Facebook ad market through reverse-engineering the *suggested bid* feature, using passive observation, hypothesis testing, statistical tests, and active experimentation
• Analyzed how different users contribute to Facebook's revenue and the overall stability of the Facebook ad market, by programmatically collecting suggested bid
• Demonstrated dramatic differences in prices paid across different user interests and locations, and long-term variability in the ad market, published in paper [3]
• Project Link: http://osn-ads.ccs.neu.edu

Measuring and Improving Facebook Privacy　　　　　　　Sep. 2010 – Oct. 2013
• Implemented the first large-scale measurement study to quantify the privacy problem that user experience on Facebook. Deployed to 200 users via crowdsourcing, published in paper [8]
• Designed and implemented Friendlist Manager (FLM), a Facebook application that proposes and creates meaningful friend lists for users based on their local social network structure

- Acquired 5,644 FLM users with 16K new friend lists created in 3 years, published in paper [7]
- Project Link: http://friendlist-manager.mpi-sws.org

WORK EXPERIENCE	**Software Engineering Intern, Narus Inc., Sunnyvale, CA** Jun. 2014 – Aug. 2014

Software Engineering Intern, Narus Inc., Sunnyvale, CA Jun. 2014 – Aug. 2014
- Investigated user personal information (PI) leaks in popular websites and mobile applications. Used a man-in-the-middle proxy to collect both HTTP and HTTPS traffic
- Developed a novel semantically-based *seeded* method that can automatically discover various types of PI carried within protocol fields of network traffic
- Evaluated our methodology using a real ISP traffic traces with 13,000 users in one day. Achieved 93% accuracy in identifying *domain-keys* with PI, published in paper [1]

Teaching Assistant, Northeastern University, Boston, MA
- Systems and Networks – an undergraduate core course, guest lecture on Bridging   Spring 2012
- Discrete Structures – an undergraduate course, taught 2-hour lecture per week, created quizzes, and held office hours   Fall 2011

SELECTED PUBLICATIONS

[1] *Identifying Personal Information in Internet Traffic*
Yabing Liu, Han Hee Song, Ignacio Bermudez, Alan Mislove, Mario Baldi, and Alok Tongaonkar
COSN, Palo Alto, CA, USA, Nov. 2015

[2] *An End-to-End Measurement of Certificate Revocation in the Web's PKI*
Yabing Liu, Will Tome, Liang Zhang, David Choffnes, Dave Levin, Bruce Maggs, Alan Mislove, Aaron Schulman, and Christo Wilson
IMC, Tokyo, Japan, Oct. 2015

[3] *Measurement and Analysis of OSN Ad Auctions (Community Contribution Award)*
Yabing Liu, Chloe Kliman-Silver, Robert Bell, Balachander Krishnamurthy, and Alan Mislove
COSN, Dublin, Ireland, Oct. 2014

[4] *Beyond CPM and CPC: Determining the Value of Users on OSNs*
Diego Saez-Trumper, **Yabing Liu**, Ricardo Baeza-Yates, Balachander Krishnamurthy, and Alan Mislove
COSN, Dublin, Ireland, Oct. 2014

[5] *Understanding and Specifying Social Access Control Lists (Distinguished Paper Award)*
Mainack Mondal, **Yabing Liu**, Bimal Viswanath, Krishna Gummadi and Alan Mislove
SOUPS, Menlo Park, CA, USA, July 2014

[6] *The Tweets They are a-Changin': Evolution of Twitter Users and Behavior*
Yabing Liu, Chloe Kliman-Silver, and Alan Mislove
ICWSM, Ann Arbor, MI, USA, June 2014

[7] *Simplifying Friendlist Management (Demo Paper)*
Yabing Liu, Bimal Viswanath, Mainack Mondal, Krishna P. Gummadi, and Alan Mislove
WWW, Lyon, France, Apr. 2012

[8] *Analyzing Facebook privacy settings: User expectations vs. reality*
Yabing Liu, Krishna P. Gummadi, Balanchander Krishnamurthy, and Alan Mislove
IMC, Berlin, Germany, Nov. 2011

GRADUATE COURSES

Advanced Algorithms, Intensive Computer Systems, Computer Networks, Applications of Information Theory, Theory of Computation, Principles of Programming Languages

SELECTED HONORS AND AWARDS

COSN Student Travel Grant	2014, 2015
COSN Community Contribution Award	2014
SOUPS Distinguished Paper Award	2014
NSDI Student Travel Grant	2013
CRA Women Grad Cohort Workshop Student Travel Grant	2012