Lilian Weng

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EDUCATION

Indiana University Bloomington, IN, USA. (2009.9 - 2014.4)
Ph.D. in Complex Networks & Systems, School of Informatics & Computing, GPA:4/4.
Thesis title: *Information Diffusion on Online Social Networks.*

Hong Kong University, Hong Kong, China. (2006.9 - 2007.1, short-term exchange)
B.S. in Information Systems, School of Business, GPA:3.80/4.

Peking University, Beijing, China. (2005.9 - 2009.6)
B.S. in Information Systems and Computer Science, GPA:3.85/4, Rank:1.
Thesis title: *Social Network Analysis of Online Question-Answer Systems*

PUBLICATIONS

Lilian Weng and Filippo Menczer. Topicality and Social Impact: Diverse Messages but Focused Messengers. *Under review*. 2014.

Lilian Weng, Filippo Menczer, and Yong-Yeol Ahn. Predicting Meme Virality in Social Networks using Network and Community Structure. *Proc. AAAI Intl. Conf. on Weblogs and social media (ICWSM)*. 2014.

Lilian Wengg and Thomas Lento. Topic-based Clusters in Egocentric Networks on Facebook. *Proc. AAAI Intl. Conf. on Weblogs and social media (ICWSM)*. 2014.

Lilian Weng, Filippo Menczer, and Yong-Yeol Ahn. Virality Prediction and Community Structure in Social Networks. *Nature Scientific Report*. (3)2522, 2013. [1]

Lilian Weng, Jacob Ratkiewicz, Nicola Perra, Bruno Gonçalves, Carlos Castillo, Francesco Bonchi, Rossano Schifanella, Filippo Menczer, and Alessandro Flammini. The Role of Information Diffusion in the Evolution of Social Networks. *Proc. ACM SIGKDD Intl. Conf. on Knowledge discovery and data mining (KDD)*. 2013.

Lilian Weng and Filippo Menczer. Computational Analysis of Collective Behaviors via Agent-Based Modeling. *Handbook of Human Computation*, Springer, 2013.

Lilian Weng and Filippo Menczer. Emergent Semantics from Game-induced Folksonomies. In: *Proc. ACM SIGKDD Crowdsourcing and data mining workshop (CrowdKDD)*. 2012.

Lilian Weng, Alessandro Flammini, Alessandro Vespignani and Filippo Menczer. Competitions among topics in a world with limited attention. *Nature Scientific Report*, (2)335, 2012. (Selected media coverage: [1][2][3][4])

Lilian Weng and Filippo Menczer. Context Visualization for Social Bookmark Management. Technical Report 1211.6799 [cs.HC], *arXiv*, 2012.

Lilian Weng, Rossano Schifanella and Filippo Menczer. Design of Social Games for Collecting Reliable Semantic Annotations. In *Proc. IEEE Intl. Conf. on Computer games (CGAMES)*. 2011.

Lilian Weng, Alessandro Flammini and Filippo Menczer. An Information Propagation Model Based on User Interests. In *Proc. 8th Intl. Conf. on Complex systems (ICCS)*, 2011.

Lilian Weng, Rossano Schifanella and Filippo Menczer. The Chain Model for Social Tagging Game Design. In *Proc. ACM Intl. Conf. on Foundation of digital games (FDG)*, 2011.

Li(Lilian) Weng and Filippo Menczer. GiveALink Tagging Game: An Incentive for Social Annotation. In *Proc. ACM SIGKDD Human computation workshop (HComp)*. 2010.

WORK EXPERIENCE

Data Scientist Intern, Data Science, Facebook Inc. (Summer 2013)

- Study the relationship between Facebook post virality and various innate features of the content, characteristics of early reshare users, and properties of the creators, aiming at improving Ads targeting strategies to trigger bigger cascades.
- Compare users with complex social circles and others with simple ego graph in terms of behavioral patterns, effort in friendship maintenance, and effects on boosting content popularity through reshare.

Software Engineer Intern, Data Science, Facebook Inc. (Summer 2012)

- Investigate how friends are clustered according to conversation topics in an ego-centric viewpoint and how the topic selecting behavior is restricted by social relationship. The study is intended to provide insights into several Facebook products like the measure of social tie strengths, friends recommendation, and newsfeed ranking.

User Research Intern, Mozilla Labs, Mozilla Corporation. (Summer 2011)

- Design, implement, and analyze two user studies for Firefox new tab re-design, aiming to better understand through quantitative user studies how people use new tabs while navigating the Web. [Related links: 1, 2, 3, 4]
- Help set up several other user tests on *Test Pilot*, an internal platform collecting structured user feedback through Firefox.

Research Intern, eBay Research Labs, eBay Inc. (Summer 2010)

- Work on data tracking, data analysis and personalization algorithm improvement for eBay Discover [`http://discover.ebay.com`].
- Design and develop an iPad app prototype which provides user experience similar to reading a real catalog but with functions of easily sharing/saving eBay products.

User Experience Intern, Yahoo! China, Alibaba.com. (2009.3-4)

- Join the team of Linezing Analytics (original Yahoo! Analytics) [`http://www.linezing.com`], with services specially designed for sellers on Taobao.com
- Product prototype design and user interaction design.

SKILLS

Proficient in Python, C++.

Familiar with Java, C#, Ruby, Object-C; HTML, CSS, Javascript, Ajax; Django, RubyOnRails; Apache, MySQL, WAMP/MAMP. Experience in C, Perl, PHP.

Cloud computing skills including HIVE, MapReduce, Hadoop.

Data analysis in Python, R, and Matlab.

Rich experience with analyzing big data.

Frequent user of Adobe Photoshop, Flex/Flash.

Experience and good sense in user experience design.

Mobile programming for Window phone, iPhone/iPad.

RESEARCH ACTIVITY

2011.10, Extended Reviewer for WWW2012 (Social networks track).

2013.4, Reviewer of Journal Technological Forecasting & Social Change.

2013.6, Reviewer of Nature Scientific Report.

2013.11, Reviewer of New Media & Society

2013.11, Reviewer of Journal Technological Forecasting & Social Change.

2014, PC Member of 5th ACM Web Science Conference 2014.

2014, PC Member of the 6th International Conference on Social Informatics 2014.

2014, PC Member of the 1st Data Visualization Workshop of ACM Hypertext 2014.

PATENT

US Provisional Patent Application No. 61/783,615; filed March 13, 2013.
Title: Systems and Methods to Predict Meme Virality Using Network Structure
Owners: Yong-Yeol Ahn, Lilian Weng and Filippo Menczer

RESEARCH EXPERIENCE

Truthy.indiana.edu (2010.12 - Present): a research project for better understanding how memes spread online (Python, C++). Indiana University Bloomington.

- Explore the role of limited user attention in determining the virality of memes by proposing a parsimonious agent-based model to investigate whether competition affects the broadly distributed meme popularity, the diversity of information that people are exposed to, and the fading of our collective interests for specific topics.
- Study the connection between network community structure and information diffusion processes. We are able to estimate and predict the future degree of meme virality by characterizing the early spreading patterns of memes in terms of network community structure.

GiveALink.org (2009.9 - 2011.9): a research-oriented online social tagging system (Ruby on Rails). Indiana University Bloomington.

- System maintenance and optimization of `GiveALink.org`.
- Work on several issues related with the social annotations, i.e. social tagging games, spam detection, API methods design and implementation, etc.
- Design and implement GiveALink Slider (`http://slider.givealink.org`), a social tagging game as incentive for generating high-quality social annotation data: people can contribute social annotations when they are having fun in the game.

Research Assistant (2007.8-2008.4), working an Web-based social bookmarking application (C#). KVision Research Group, Peking University.

- Aim to strengthen the loose structure of folksonomy using ontology / semantic Web techniques.

RESEARCH INTERESTS

Complex networks and systems; Data mining; Web mining; Machine learning; Network community structure; Information diffusion on social networks; Modeling of dynamical processes on networks.; Social media and social networks analysis; Social web application; User experience research; Human-computer interaction.

TEACHING EXPERIENCE

Associate Instructor (2010.9-2010.12) for INFO-I527: Search Informatics,
School of Informatics and Computing, Indiana University Bloomington

MAIN COURSES	Algorithm & theory of computing; Machine learning; Web Mining; Introduction to complex systems; Seminars in complex system; Bayesian data analysis; Natural language processing; Cloud computing; Mobile computing; Design and analysis of secure protocols & systems.
SCHOLARSHIP	2010.4, Women in Computing (WIC) Grad Cohort Scholarship. 2009.6, Graduate with Honor of Peking University. 2007.3-2008.11, President's Undergraduate Research Fellowship. 2007-2008, National Scholarship. 2008-2009, National Scholarship. Fall 2006, Li & Fung Scholarship, by the Li & Fung Foundation Limited.
VOLUNTEER WORKS	2008.8, Volunteer of Beijing 2008 Olympic Games. 2008.9-10, JING Forum 2008 between Peking University and University of Tokyo.
HOBBY	I enjoy design and drawing using the digital tablet on computer in my spare time, mainly in Photoshop. I also love oil painting on the real canvases. Many drawings are available here: `http://picasaweb.google.com/lilian.wengweng/Drawings`