Lilian Weng

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EDUCATION

Indiana University Bloomington, IN, USA. (2009.9–2014.4)
Ph.D. in Complex 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*

WORK EXPERIENCE

Product Engineer, Content & Workflows, Dropbox Inc. (Aug 2015–Now)

- Work on a new Dropbox product, *Recents*, providing a customized home feed of latest file events for every user. It is inspired by the recency factor that users tend to revisit files that they recently visited or edited.

Data Scientist, Data Science, Dropbox Inc. (Apr 2014–Aug 2015)

- Build the new generation of Dropbox gating system for feature launching and AB testing, with support for mutual exclusive groups, the tolerance to mutable exposure groups, and Hive-based user targeting.
- Develop an internal platform for easy creation and monitoring of upsell campaigns, seamlessly connecting the backend user segments and frontend display (*patent filed*). Currently hundreds of marketing and product campaigns are running in this system.
- Improve and evaluate the ranking performance of Dropbox full-text search.
- Work out and maintain various data sources about user profiling and user behavior.
- Run analyses and design metrics of user behavior and engagement with various Dropbox products, including shared folders, collaboration, onboarding experience, and many others.
- Collaborate with teams across the company on tasks related to machine learning and data insights; i.e., visualization and insights of cross-domain collaboration network.

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 graphs in terms of behavioral patterns, efforts in maintaining friendship, and effects on boosting content popularity through resharing.

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.
- Publication: L. Weng and T. Lento. Topic-based Clusters in Egocentric Networks on Facebook. In: *Proc. AAAI Intl. Conf. on Weblogs and social media (ICWSM)*. 2014.

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

- Design, implement, and analyze several user studies for Firefox new tab re-design, aiming to better understand how people use new tabs while navigating the Web through quantitative user research. [Related links: 1, 2, 3, 4]

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

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

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

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

PATENT

Title: *Method and System for Efficiently Serving Upsell Content based on Complex User Archetypes.*
Owners: Viraj Mody, Robert Kajic, Pranav Piyush, and Lilian Weng
Dropbox Ref. No.: P535US1; Hickman Ref. No.:60332-0061. Filed Feb 26, 2014.

Title: *Systems and Methods to Predict Meme Virality Using Network Structure.*
Owners: Yong-Yeol Ahn, Lilian Weng and Filippo Menczer
Publication No.: WO 2014159540 A1; Application No.: PCT/US2014/024062. Filed Mar 12, 2014.

SKILLS

Proficient in Python, C++.

Rich experience with analyzing big data.

Data analysis in Python, R, and Matlab.

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

Frequent user of Adobe Photoshop, Flex/Flash.

Experience and good sense in user experience design.

Mobile programming for Window phone, iPhone/iPad.

PUBLICATION

Lilian Weng and Filippo Menczer. Topicality and Impact in Social Media: Diverse Messages, Focused Messengers. *PLOS ONE* 10(2): e0118410. doi: 10.1371/journal.pone.0118410. 2015.

Lilian Weng, Márton Karsai, Nicola Perra, Filippo Menczer, and Alessandro Flammini. Attention on Weak Ties in Social and Communication Networks. *Under review*, 2015.

Lilian Weng and Filippo Menczer, and Alessandro Flammini. Online Interactions. In *Social Phenomena: From Data to Models*, Springer. 2014.

Lilian Weng. Information Diffusion on Online Social Networks. *Ph.D. dissertation*, Indiana University. 2014.

Lilian Weng, Filippo Menczer, and Yong-Yeol Ahn. Predicting Successful Memes using Network and Community Structure. In: *Proc. AAAI Intl. Conf. on Weblogs and social media (ICWSM)*. 2014.

Lilian Weng and Thomas Lento. Topic-based Clusters in Egocentric Networks on Facebook. In: *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. (Media coverage: [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. In: *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. (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.

ACADEMIA SERVICE

2015.09 Reviewer of Transactions on the Web.

2015.07 PC Member of WWW2016.

2015.03 PC Member of 6th ACM Web Science Conference 2015.

2015.01, Sub reviewer of WWW2015.

2014.10, Reviewer of Physica A.

2014.10, Reviewer of the Transactions on Knowledge and Data Engineering.

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

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

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

2013.11, Reviewer of Journal Technological Forecasting & Social Change.

2013.11, Reviewer of New Media & Society.

2013.6, Reviewer of Nature Scientific Report.

2013.4, Reviewer of Journal Technological Forecasting & Social Change.

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

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.

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 semantic Web techniques such as ontology.

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 drawing with the digital tablet on computer, mainly in Photoshop, and acrylic/oil painting on the real canvases in my spare time.
My paintings are available here: http://picasaweb.google.com/lilian.wengweng/Drawings.