

## Minh X. Hoang

## CONTACT INFORMATION

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## EDUCATION

**Ph.D. in Computer Science**  
*University of California, Santa Barbara, CA*  
 GPA: xxx

(expected) Jun 2017

**B.E. in Computer Science**  
*Hanoi University of Science and Technology, Hanoi, Vietnam*  
 Ranked xxx in Computer Science Department

Aug 2010

## TECHNICAL SKILLS

*Languages:* Proficient in xxx. Have experience with xxx  
*Operating Systems:* UNIX, Windows  
*Frameworks/Tools:* xxx

## EXPERTISE

XXX

## RESEARCH EXPERIENCE

**Data Mining and Bioinformatics Laboratory, UC Santa Barbara, CA**      **Jul 2011 - present**  
**Research Assistant**

Project: *Forecasting information cascades in social networks*

- Designed novel approaches to summarize and estimate the statistics and evolution of information spread in social networks based on partial observations in an accurate and scalable manner.

Project: *Mining discriminative subgraphs from global-state networks*

- Proposed a fast and accurate algorithm to extract discriminative subgraphs that best predict the global state of networks given local states on nodes.

Project: *Answering top-k representative queries on graph databases*

- Proposed novel index structure to efficiently compute top-k answer set that is both relevant and representative in graph databases with speedup of up to three orders of magnitude over baselines.

## RELEVANT INDUSTRY EXPERIENCE

**Microsoft Research Asia, Beijing, China**  
**Research Intern**

**Jun - Sep 2015**

Project: *Spatio-temporal model for predicting urban traffic flows from taxi GPS data.*

- Devised a scalable spatio-temporal algorithm to predict the flows of taxis and bikes for different functional regions of Beijing and New York with over 40% improvement over baselines.
- Collaborated with 2 team members on collecting and cleaning business data.

Adobe Systems, San Jose, CA

Jul - Sep 2014

Machine Learning and Data Science Intern

Project: *Expertise-based clustering of artists on Behance.net online social network*

- Designed an algorithm to detect communities of creative users in a large heterogeneous network of 7 million users, utilizing both their profiles and their activities to capture users' expertise.
- Worked biweekly with newly acquired Adobe company to ensure smooth transfer of data and relevant business-related project goals.
- Presented research findings and reported experimental results biweekly on a new community detection algorithm to other team members and the lead researcher of the acquired company.

VNG Research, VNG Corporation, Hanoi, Vietnam

Aug 2010 - Jul 2011

## R&D Engineer

Projects: *Friend suggestion and feed ranking systems*

- Designed and implemented Friend Suggestion System for Zing Me, the largest Vietnamese social network with over 10 million users, and increased friendship suggestion accuracy from 53% to 86%.
- Designed and implemented Feed Ranking System using Redis for storage and Thrift for interface with web-based applications.
- Communicated with various business departments (e.g., front-end and back-end teams) to implement efficient system design and smooth product launches.

ADDITIONAL EXPERIENCE	IBM T.J. Watson Research Center, Yorktown Heights, NY		Jun - Sep 2013
	<b>Research Intern</b>		
	Project: <i>Distributed system for analyzing call data records</i>		
	<ul style="list-style-type: none"> <li>Designed and implemented a Hadoop system to detect anomalies in phone call networks.</li> <li>Proposed a new method for detecting anomalies in evolving networks.</li> <li>Discussed weekly with 2 IBM researchers on anomaly detection algorithms and system design.</li> </ul>		
	Raytheon BBN Technologies, Cambridge, MA		Jun - Sep 2012
	<b>Advanced Networking Graduate Intern</b>		
	Project: <i>Structural properties and evolution of collaboration networks: A simplicial perspective</i>		
	<ul style="list-style-type: none"> <li>Studied group dynamics in the formation and evolution of collaboration networks.</li> <li>Discussed weekly with a BBN researcher on evaluation metrics for group dynamics, and presented findings to researchers at the US Army Research lab.</li> </ul>		
	Laboratory of Networking, HUST, Hanoi, Vietnam		Jan - Jul 2010
	<b>Research Intern</b>		
	Project: <i>Biometric-based network access control and information security system</i>		
	<ul style="list-style-type: none"> <li>Researched multimodal biometric fusion at matching score level, leading to an improvement in error rate from 2.57% to 0.17% in comparison with single-fingerprint system.</li> <li>Implemented and integrated multimodal biometric authentication solution into hybrid Biometric/PKI-based access control system.</li> <li>Collected fingerprint data from 50 students at HUST to test the new authentication solution in a realistic environment.</li> </ul>		
	BKIS Security, Bkav Corporation, Hanoi, Vietnam		2007 - 2010
	<b>Security Engineer</b>		
	<ul style="list-style-type: none"> <li>Researched security vulnerabilities (SQL-injection, heap-based and stack-based buffer overflow).</li> <li>Analyzed malicious codes and software vulnerabilities; issued patches and fixes.</li> <li>Implemented security software, including local network and software vulnerability scanners.</li> <li>Trained new interns on popular tools and techniques related to security vulnerabilities.</li> </ul>		
SELECTED PUBLICATIONS	[1] GPOP: Group-based Popularity Prediction of Online Content. (acceptance rate 17%)		
	Minh X. Hoang, Xuan-Hong Dang, Xiang Wu, Zhenyu Yan, Ambuj K. Singh.		
	2017 WWW International World Wide Web Conference		
	[2] FCCF: Forecasting City-wide Flows of Crowd using Big Data. (acceptance rate 18%)		
	Minh X. Hoang, Yu Zheng, Ambuj K. Singh.		
	2016 ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems		
	[3] Beyond Models: Forecasting Complex Network Processes Directly from Data. (acceptance rate 16%)		
	Bruno Ribeiro, Minh X. Hoang, Ambuj K. Singh.		
	2015 WWW International World Wide Web Conference		
	[4] Answering Top-k Representative Queries on Graph Databases. (acceptance rate 25%)		
	Sayan Ranu, Minh X. Hoang, Ambuj K. Singh.		
	2014 ACM SIGMOD International Conference on Management of Data		
	[5] Mining Discriminative Subgraphs from Global-state Networks. (acceptance rate 17%)		
	Sayan Ranu, Minh X. Hoang, Ambuj K. Singh.		
	2013 ACM SIGKDD Conference of Knowledge Discovery and Data Mining		
RELEVANT COURSEWORK	Machine Learning	Data and Knowledge Bases	Web Search and Mining
	Artificial Intelligence	Data Structures and Algorithms	Computational Geometry
	Deep Learning	Distributed Systems	Approximations and NP-Completeness
	Network Security	Bioinformatics	Combinatorial Algorithms
SELECTED HONORS AND AWARDS	2016	xxx	
	2014	xxx	