Amit Goyal

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RESEARCH INTERESTS

I am broadly interested in **Data Mining**, **Web Mining, Machine Learning, Discrete Optimization** with emphasis on **Social Networks**, **Influence Propagation** and **Recommender Systems**. In my PhD, I explored various aspects of influence propagation in social networks – who influences whom, on what kinds of actions, with how much probability and how various applications can benefit from social influence intelligence. My h-index is 6 and my publications have received more than 200 citations (in last 3 years).

EDUCATION

M.Sc. and Ph.D. in Computer Science (Sept 2007 – Feb 2013),
University of British Columbia (UBC), Vancouver, Canada.
Topic: Social Influence and its Applications: A Data Mining and Algorithmic Study.
Advisor: Laks V. S. Lakshmanan

Bachelors of Technology (B.Tech.) in Computer Science (2001 – 2005),
Indian Institute of Technology (IIT), Bombay, India.

PUBLICATIONS

[1]   Wei Lu, Francesco Bonchi, Amit Goyal, Laks V. S. Lakshmanan. *Competitive Viral Marketing: In the Eyes of a Campaign Host*. Under Review.

[2]   Shailendra Agarwal, Amit Goyal, Laks V. S. Lakshmanan. *Revisiting Recommendations: From Consumers to Manufacturers*. Under Review.

[3]   Amit Goyal, Laks V. S. Lakshmanan. *RecMax: Exploiting Recommender Systems for Fun and Profit*. In ACM Conference on Knowledge Discovery and Data Mining, KDD 2012.

[4]   Amit Goyal, Francesco Bonchi, Laks V. S. Lakshmanan. *A Data-based approach to Social Influence Maximization*. In International Conference on Very Large Databases, VLDB 2012.

[5]   Smriti Bhagat, Amit Goyal, Laks V. S. Lakshmanan. *Maximizing Product Adoption in Social Networks*. In Web Search and Data Mining, WSDM 2012.

[6]   Amit Goyal, Wei Lu, Laks V. S. Lakshmanan. *Simpath: An Efficient Algorithm for Influence Maximization under the Linear Threshold Model*. In International Conference on Data Mining, ICDM 2011.

[7]   Amit Goyal, Wei Lu, Laks V.S. Lakshmanan. *CELF++: Optimizing the Greedy Algorithm for Influence Maximization in Social In Social Networks*. In International World Wide Web Conference, WWW 2011 (Companion Volume).

[8]   Amit Goyal, Francesco Bonchi, Laks V.S. Lakshmanan. *Learning Influence Probabilities In Social Networks*, In Web Search and Data Mining, WSDM 2010.

[9]   Amit Goyal, Francesco Bonchi, Laks V.S. Lakshmanan. *Discovering Leaders from Community Actions*, In International Conference on Information and Knowledge Management, CIKM 2008.

[10] Amit Goyal, Francesco Bonchi, Laks V. S. Lakshmanan, Suresh Venkatasubramanian. *On Minimizing Budget and Time in Influence Propagation over Social Networks*. In Social Network Analysis and Mining, SNAM 2012.

[11] Amit Goyal, Francesco Bonchi, Laks V.S. Lakshmanan, Byung-Won On. *Gurumine: a Pattern Mining System for Discovering Leaders and Tribes*, In International Conference on Data Engineering, ICDE 2009 (Demo paper).

PATENTS GRANTED

[1]   Francesco Bonchi, Laks V. S. Lakshmanan, Amit Goyal. *Discovering Leaders in a Social Network.* US Patent App. 12/246,668.

HONORS & AWARDS

- Awardee of **Faculty of Science Graduate Award** at University of British Columbia, Canada (Jan 2012 – Apr 2012).
- Recipient of **Ph.D. Tuition Fee Award** at University of British Columbia (2008 – 2012).
- Recipient of strategic network grant from **NSERC BIN** (Business Intelligent Network) Canada (2010-2012).
- **All India Rank 12** among 200,000 students in the Indian Institute of Technology – Joint Entrance Examination (IIT-JEE) 2001.
- **All India Rank 16** in National Science Talent Search Examination in 1999.

- Recipient of the prestigious **National Talent Search Examination** scholarship awarded by the Govt. of India. I secured **4th** rank in state level exam of the same.
- Secured **9th** rank in **State Science Talent Search Examination** scholarship awarded by the Govt. of Rajasthan, India in 1999.
- Awardee of **certificate of merit**, National Top **1%** for National Standard Examination in Mathematics, at Higher Secondary Level (2001).
- In top 200 students of the country in the **Indian National Physics Olympiad** (year 2000).

INDUSTRIAL EXPERIENCES

Co-founder of Namkis Online Inc.
- I opened a startup called Namkis with three other people. This is an iPhone app (link http://itunes.apple.com/us/app/namkis/id521594693?ls=1&mt=8), which lets users to share their consumer experiences in terms of "smiles" and "scowls". Users can receive recommendations of great businesses around them. As Co-founder, I was involved in brainstorming the idea, developing backend (in Java), iPhone app (in Objective-C) and some parts of website/blog (in PHP, HTML, CSS, jQuery).

Summer Intern in Yahoo! Sunnyvale (June 2008 – Aug 2008)
- I worked in Advertisement Targeting team, which focus on deriving short term and long term user interests based on past user activities and thus serve advertisements to them.
- Presented a talk and a hack on *Yahoo! Quarterly Hack day*. **Won Newbie Shine Award** (out of 58 entries) and nominated for **people's choice award** (5 out of 58). In this hack, we developed a chat bot based on *Alice*, and was integrated to *Y! Answers* and *Y! Messenger*.

Senior Research Engineer in Yahoo!, Bangalore (2005 – 2007)
- **Automatic Online Form Filling**
  We developed machine learning based automated online form-filling framework for automatically completing user input controls based on previously stored information. The framework could learn and infer forms of different natures, and map them to a common schema, thus getting the semantic interpretation of different form fields irrespective of their layout, language, locale or vertical.
- **Extracting Information from a Resume**
  We designed a framework to extract important information from a resume. For example, name, address, skills, education and work experience details etc.

RELEVANT COURSES (GRADUATE LEVEL)

Data Mining and Machine Learning, Data Management and Mining, Statistical Inference, Advance Algorithms and Data Structures, Dynamic Programming, Operating Systems, Topics in Numerical Computations.

TECHNICAL SKILLS

Operating Systems	Linux, Solaris, BSD, Debian, AIX, Windows
Programming languages	C, C++, JAVA, Objective-C
Scripting	Python, PHP, Unix Shell, Perl/CGI, Scheme, Prolog, Haskell, Javascript
Databases	MySQL, Oracle, PostgreSQL
Others	Matlab, HTML, XML, AJAX, SQL, VHDL, Verilog, Prolog, SVN, Perforce, CVS, J2EE, Spring, Struts, Hibernate.
System Administrator	Configuration and maintenance of web/ftp servers, nfs/nis/ldap servers, squid proxy server, dns server, firewall setup, media streaming server etc.

EXTRA CURRICULAR ACTIVITIES
- Member of **Grad Recruiting Committee**, Dept. of Computer Science, UBC (2010-2012).
- **Web Admin**, Database Systems Lab, Dept. of Computer Science, UBC (2007-2009).
- **Web Admin** and Newsletter Editor, Utsav – Indian Students Association, UBC (2008-2009).
- I was one of the 4 members of **Middle Layer Committee** (MLC) of IIT Bombay (2004-05). It is a student body, which looks after Networking and Computer related issues in the institute. At the same time, it provides technical assistance to the System Administrators and students.
- I was the **Script Coordinator** of PAF (performing arts festival), 2005 for the Dorm (Hostel Eight). PAF is a one hour-long live play involving original script, music, production etc. Usually, it requires one-month hard work of about 100 students to make one PAF.
- I was the **Dramatics Secretary** of our Dorm in 2002-03 and participated in various dramatics events like Street Play, Drams etc. We won the cultural trophy in my tenure.

REFERENCES
- Prof. Laks V. S. Lakshmanan (UBC), Prof. Christos Faloutsos (CMU), Dr. Francesco Bonchi (Yahoo! Research), Prof. Suresh Venkatasubramanian (U. of Utah).