

SHILAD SEN

651-696-6273 • ssen@macalester.edu • <http://www.shilad.com>

EDUCATION

- Aug '04 - March '09* **University of Minnesota**, Minneapolis, MN – (GPA: 3.80/4.00)
Ph.D. in Computer Science (March 2009), advisor: John Riedl
- June '03 - June '04* **Tufts University**, Medford, MA – (GPA: 4.00/4.00)
Post-Baccalaureate Studies, Computer Science
- Sept '94 - June '99* **Northwestern University**, Evanston, IL – (GPA: 3.52/4.00)
B.A. Mathematics / B.M. Saxophone Performance

POSITIONS HELD

- Aug '08 - present* **Macalester College**, *Assistant Professor*, St. Paul, MN
- Teach classes in Object-Oriented Programming, Internet Programming, Operating Systems, Networking.
- Sept '07 – Dec '07* **University of Minnesota**, *Course Instructor*, Twin Cities
- Co-taught CS1902, Structure of Computer Programming II
- Summer '07* **Google, Inc**, *Software Engineering Intern*, Mountain View, CA
- Conceived, designed, and implemented a social feature for Google Checkout in Java.
- Summer '06* **Thomson Legal Research and Development Group**, *Research Intern*, Eagan, MN
- Improved recommendation system for over 10 million documents on westlaw.com.
 - Designed and evaluated hybrid metadata/clickstream clustering algorithms using offline usage data.
- Summer '05* **IBM Research Collaborative User Experience Group**, *Research Intern*, Cambridge, MA
- Improved [Activity Explorer](#), a Java application supporting ad-hoc group collaboration, by creating a general alert management system employing rules-based and predictive software alert filtering.
 - Served as lead author of *CSCW 2006* research paper based on research.
 - Filed six patents based on research results.
- Oct '04 – Present* **GroupLens Research Group**, *Research Assistant*, University of Minnesota, Minneapolis, MN
- Social Tagging Systems (e.g. <http://flickr.com>, <http://del.icio.us>):
 - Analyzed factors influencing vocabulary development in social tagging systems.
 - Built human and machine-learning systems to classify individual tags as good or bad.
 - Explored methods for combining tagging systems and recommender systems.
 - Recommender Systems:
 - Implemented and evaluated a wide range of recommender algorithms on multiple datasets.
 - Assisted in creation of <http://wikilens.org>, a member-maintained recommender community.
- Sept. '98 – Oct '04* **Sourcelight Technologies**, *Lead Engineer and Software Manager*, Evanston, IL
- Promoted to lead engineer after one year
 - Led research and development of Sourcelight's Recommendation Engines
 - Created and oversaw maintenance of hosted movie recommendation service for clients including as Blockbuster Inc., Hollywood Video, and Comcast Cable written in Java, Python, and C.
 - Designed a scalable, redundant system architecture in C/C++ and Python that supports features such as automatic failover and on-the-fly addition of new servers. Demonstrated performance improvements of up to 20X over original system.
 - Developed clustering models for music prediction built from one half billion ratings.

PUBLICATIONS

Highly Selective Conference Papers:

- **S. Sen**, J. Vig, J. Riedl, “Tagommenders: Connecting Users to Items Through Tags,” to appear in *WWW 2009* (12% acceptance rate).
- **S. Sen**, J. Vig, J. Riedl, “Learning to Recognize Valuable Tags,” to appear in *IUI 2009* (25% acceptance rate).

PUBLICATIONS (Continued)

Highly Selective Conference Papers (continued):

- J. Vig, **S. Sen**, J. Riedl, "Tagsplanations: Explaining Recommendations Using Tags," to appear in *IUI 2009* (25% acceptance rate) **winner of Best Paper** (awarded to less than 1% of submissions).
- S. Drenner, **S. Sen**, L. Terveen, "Crafting the initial user experience to achieve community goals", *RecSys 2008* (acceptance rate: 30%).
- **S. Sen**, F. Harper, A. LaPitz, J. Riedl, "The Quest for Quality Tags." *GROUP 2007* (28% acceptance rate).
- **S. Sen**, S. Lam, D. Cosley, M. Al-Rashid, D. Frankowski, F. Harper, J. Osterhouse, J. Riedl, "tagging, communities, vocabulary, evolution." *CSCW 2006*. (22% acceptance rate) **Winner of Best of CSCW Award** (awarded to 1% of all submissions).
- **S. Sen**, W. Geyer, M. Muller, M. Moore, B. Brownholtz, E. Wilcox, "FeedMe: A Collaborative Alert Filtering System." *CSCW 2006*. (22% acceptance rate).
- D. Frankowski, D. Cosley, **S. Sen**, L. Terveen, J. Riedl, "You Are What You Say: Privacy Risks of Public Mentions." *SIGIR 2006* (19% acceptance rate).

Selective Conference Papers:

- F. Harper, **S. Sen**, D. Frankowski, "Supporting Social Recommendations with Activity-Balanced Clustering." To appear, *2007 ACM Recommender Systems*.
- D. Frankowski, S. Lam, **S. Sen**, F. Harper, S. Yilek, M. Cassano, J. Riedl, "Recommenders Everywhere: The WikiLens Community-Maintained Recommender System." *WikiSym 2007*.

Book Chapters:

- Shafer, **Sen**, Frankowski, Herlocker, "Collaborative Filtering Recommender Systems" in *Adaptive Web-Based Systems*. Springer, 2007.

INVITED TALKS

"Choosing Tags", CSCW 2008

"Nurturing Tagging Communities", Google Tech Talk 2007

AWARDS

Best Paper Award Winner, awarded to top submission, IUI Conference, 2009

Best of CSCW Award Winner, awarded to 1% of submissions, CSCW Conference, 2006

IBM Patent Plateau Award (for four or more patents), 2006

Second Place, North American Saxophone Alliance Jazz Competition, 1999

FUNDING

External Funding:

- NSF: "Guiding Folksonomy Development to Enable Novel Tagging Applications," (Macalester PI Shilad Sen, Univ of MN PI Loren Terveen and Co-PI John Riedl). Funded for \$1,200,000 from May 2010 to May 2014 (Macalester College portion of grant is \$250,000).

Internal Macalester College Funding:

- Keck: "Building the Poliwiki Experimental Web Platform," (PI Shilad Sen). Funded for \$7000.
- Wallace: "Tagommenders: Connecting Users to Items Through Tags." Travel grant for \$3000 to present research at the World Wide Web Conference in Madrid, Spain.

PROJECTS

June '09 - present

Poliwiki Experimental Web Platform, <http://www.poliwiki.org>

- Developing a community-maintained political website that will serve as an experimental platform for exploring multiple points of view about polarizing issues.
- Led a team of four students in building a prototype version of the website in Summer 2009.
- Engaged Macalester and non-Macalester advisory board for the site.
- Publicly launching the site this spring.

Mar '01 - April '03

Fast Python XML-RPC Library, <http://www.sourceforge.net/projects/py-xmlrpc>

- Created cross platform implementation of XML-RPC protocol, a remote procedure call mechanism that serializes object using XML and sends them using HTTP.
- Demonstrated speed improvements of up to a factor of 20 over similar libraries.
- Cultivated widespread adoption of library through its incorporation in at least two major Linux distributions (Debian and GenToo) and over 9000 downloads.

Sept '98 - June '99

Computer Jazz Improvisation System, <http://www.shilad.com/jazz>

- Created software system in Java that allows users to input chords, harmonic devices, and songs.
- Derived and implemented expert-based rules to generate improvisational solos using these constructs.

April '06 - present

Co-producer and saxophonist, <http://www.snowblindmusic.com>

- Released “Arctic Fury” and “Taking Shape” CDs with *Snowblind*, a jazz quintet.
- Performed at the 2006 Twin Cities Summer Festival and the 2007 Twin Cities Winter Jazz Festival.

PROFESSIONAL

Program Committee Member:

- International Conference on Intelligent User Interfaces, 2009
- International Conference on Electronic Commerce, 2009
- International Conference on Electronic Commerce - Web Technologies, 2009

Referee: *The Interdisciplinary Journal of HCI, The Journal of Machine Learning Research, The New Journal of Physics, ACM Transactions on Information Systems*, and over twenty conference proceedings.

SKILLS

Programming Languages: C/C++, Java, Python, Perl, SQL, Tcl, VB, LISP, ML, Groovy, Matlab

Operating Systems: Linux, Sun/Solaris, Windows

Technologies: HTTP, TCP/IP, J2EE, XML, Apache, Tomcat, JBoss, SWT, Hibernate

Tools: Standard unix tools (vi, make, sed, awk, etc.) Eclipse, JBuilder, Webstudio, Visual Studio, ant

Databases: Postgresql, MySQL, Sybase, Oracle

INTERESTS

Playing jazz saxophone, squash, traveling, building things, basketball