

Liam Stewart

1701 – 50 Alexander Street
Toronto, Ontario M4Y 1B6

416-927-9010
liam@squozen.org

Citizenship: Canadian

Languages: Fluent in English and French

COMPUTER SKILLS

- Platforms: Linux, UNIX, Windows 2000/XP, MacOS X
- Applications: CVS, Subversion, MySQL, LaTeX, XEmacs
- Languages: bash, C, C++, Java, JavaScript, MATLAB, OCaml, PHP, Python, SQL
- Knowledge of a variety of techniques including modeling and design, documentation, version control, and testing.
- Experience with a wide range of areas including machine learning, distributed computing, databases, and web application development.

COMMUNICATION AND LEADERSHIP SKILLS

- Excellent oral and written communication skills through presentations, tutorials, and reports.
- Very good interpersonal, leadership, and instructional skills through work and volunteer activities, course projects, and office hours and tutorials.

EDUCATION

2003 – 2005 **Master of Science**, Computer Science, University of Toronto

Thesis: Structure Learning in Sequential Data

Supervisor: Richard S. Zemel

Courses: Machine Learning, Machine Learning Theory, Probabilistic Inference, Computer Graphics, Bayesian Methods for Machine Learning

1998 – 2003 **Bachelor of Science (Honors)**, Computing Science, University of Alberta

INDUSTRY EXPERIENCE

2006 – present **Software Development Engineer**, Idée Inc., Toronto

- Designed and implemented a parallel job scheduler used to run mission critical programs on a cluster of 180 computers.
- Implemented tools to automate the workflow of the image monitoring service.
- Maintained and extended the database and internal web applications used by members of the image monitoring team.

2001 – 2002 **Software Developer**, Red Hat Database Group, Red Hat Canada, Toronto (Full-time internship)

- Designed and implemented *RHDB Visual Explain*, a query plan visualization tool for PostgreSQL.
- Created a system for automatically building and packaging Red Hat Database.
- Revised existing user documentation and wrote new documentation.

RESEARCH EXPERIENCE

2003 (summer) **Research Assistant**, Department of Mathematical and Statistical Sciences, University of Alberta

- Contributed to the design and implementation of a method for automatically optimizing the parameters of a particle filter.
- Implemented a particle filter for tracking multiple non-interacting objects.
- Trained an incoming student.

- 2000 – 2001 **Research Assistant**, Department of Computer Science, University of Alberta
- Developed and tested router configurations for several network topologies.
 - Wrote tools and documentation to aid in configuration loading and library maintenance.
 - Created a server to enable subscriber-to-subscriber communications in NBMA DSL networks.

TEACHING EXPERIENCE

- 2003 – 2005 **Teaching Assistant**, Department of Computer Science, University of Toronto
- Taught software design, artificial intelligence, and compilers and interpreters.
 - Ran weekly tutorials for groups of 20-30 students. Tutorial skills evaluated positively by a Teaching Assistant Training Program (TATP) director.
 - Graded assignments and exams; provided feedback to both students and course instructors.

OPEN SOURCE EXPERIENCE

- Designed and implemented a MATLAB wrapper around the L-BFGS numerical optimizer.
- Designed and implemented the wiki parser used by DrProject.
- Added functionality to LACAML, an OCaml interface to the BLAS and LAPACK libraries.

PROFESSIONAL MEMBERSHIPS

- Association for Computing Machinery (ACM)
- Society for Industrial and Applied Mathematics (SIAM)

PUBLICATIONS

- Liam Stewart, Xuming He, and Richard S. Zemel. *Learning Flexible Features for Conditional Random Fields*. IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI). Under review.
- Jasper Snoek, Jesse Hoey, Liam Stewart, and Richard S. Zemel. *Automated Detection of Unusual Events on Stairs*. In Proceedings of the 3rd Canadian Conference on Computer Vision (CRV) 2006. Québec City, Québec.
- Mike MacGregor and Liam Stewart. *Enabling Subscriber-to-Subscriber Communications in an NBMA DSL Network*. *SCI 2002*, Orlando, July 2002.

AWARDS

- University of Alberta Dean's Silver Medal in Science (2003)
- NSERC PGS A Postgraduate Scholarship (2003)
- Barry J. Mailloux Prize in Computing Science (2002)
- NSERC Undergraduate Research Awards (2000, 2003)
- Louise McKinney Post-Secondary Scholarship (2000)

COMMUNITY ACTIVITIES

- 2003 – 2005 Member of the Hart House Jazz Ensemble, trumpet.
- 1999 – 2001 Member of the University of Alberta Faculty of Science's mentor program.
- 1998 – 2003 Member of the University of Alberta Concert Band, trumpet.
- 1997 – 2003 CKUA Radio Network, library.

INTERESTS

Cycling, sport climbing, classical and jazz music, science, and current affairs.

REFERENCES

Available upon request.