

# Stuart Williams, M.Sc.

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## Career Summary

Senior IT professional with broad experience in software development, consulting, teaching, diagnosis, servers and networks, and security. A creative problem solver who delivers solutions that are innovative, compelling, and realistic. An effective communicator, trainer, mentor, and advocate.

- Strengths in teaching and mentoring, and a passion for helping individuals and teams increase productivity through teaching, the application of new techniques, and choosing appropriate tools.
- Experienced consultant with strong customer engagement skills who inspires confidence in clients. In consulting business in Calgary, developed a reputation for honesty and enabling clients to become more self-sufficient, resulting in all new business coming in through referrals.
- History of insightful diagnosis of large systems of networks, software, and people – determining the points of failure or weakness that are in most need of attention.
- Careful researcher who likes tackling hard problems, investigating possible new directions, and clearly articulating results.
- Capable project and people manager who keeps track of both the forest and the trees.

## Professional Experience

### Senior Software Developer

Investors Group

2006-present  
Winnipeg, Manitoba

- Significant focus on third-party software including integration with existing complex systems, black-box defect diagnosis, diagnosis of critical database performance problems, and batch on-call duties.
- Selected to participate in a year-long leadership development program offered to 1.3% of employees.
- Lead software developer providing oversight to teams on several small and large software projects.
- Drove the adoption of Python as the standard scripting language for the IT division of the 25,000 employee cross-company enterprise.
- Delivered seminars and 3-day courses in Python to employees, and a Code Review workshop to employees of a third-party package vendor.

### Consultant

S. Williams Consulting

2004-2006  
Winnipeg, Manitoba

- Consulted (part-time) in software design and development in Python, content management system development in Zope/Plone, UNIX administration, network troubleshooting and diagnosis, and Voice over IP.

### Assistant Professor of Computer Science

CANADIAN MENNONITE UNIVERSITY

2000-2005  
Winnipeg, Manitoba

- Designed and implemented the Computer Science degree program and curriculum in the startup phase of a new university.

- Developed highly-praised computer summer camp program for high school students.
- Coordinated growing Arts and Sciences faculty group of eight professors.
- Contributed significantly to several influential policy committees.
- Created and sold to Faculty and Board a unique and innovative salary scale which balanced competing demands of the university.

**Consultant**

1995-2000

S. Williams Consulting

Calgary, Alberta

- Consulted (full-time) in software development, UNIX system administration and diagnosis, network security (audits and firewalls), and technical training.

**Director of Technical Operations**

1993-1995

GEMINI LEARNING SYSTEMS INC.

Calgary, Alberta

- Managed UNIX outsourcing contracts, handling contracting consultants and doubling revenue with new and increased contracts.
- Technical consultant to a joint research venture developing educational software with the Alberta Research Council.
- Taught 2-5 day courses C++, C, Perl, Unix System Administration, Motif, and Emacs.

**Software Developer**

1987-1989

INTERACTIVE TECHNOLOGY INC.

Beaverton, Oregon and Viroflay, France

- Maintenance and development on a large database program. Ported to VMS, DOS, and Xenix. Regularly achieved milestones ahead of expectations.
- Designed and implemented Pascal source code pre-processor in C to more reliably support multiple target systems (TSX, RT-11, RSTS, VMS, Xenix, DOS).

**Education****M.Sc.** (Computer Science and Engineering)

University of Washington, Seattle, 1993

- Master's research in type checking in an object-oriented language, *Static Type Checking of Multi-Methods in Cecil*, adviser Craig Chambers, software development in Self.
- Secondary research area in medical image coding (image compression) using neural network algorithms on parallel architectures.

**B.Sc.** (Physics)

Wheaton College, Illinois, 1987

**B.Sc.** (Mathematics/Computer Science)

Wheaton College, Illinois, 1987

- Award for the Outstanding Senior Math or Computer Science Major
- Magna Cum Laude

## Abbreviated Portfolio

### Software Development

*Languages:* Python & Java (and past experience in C++, C, Perl, Pascal, Ada, and Fortran).

- Lead software developer integrating a third-party package via web services in Java.
- Medium-sized Python programs and in-house libraries.
- Log file summary and comparison tools in Python to support development and testing of oil reservoir simulation software (2006-2008).
- Database and genetics computations web application in Python (2005).
- Implement and customize web based Content Management System (Plone/Python) for event calendar of medium-sized distributed organization (2005).
- Maintenance and development of salary tracking web and database application in Perl (1997-2001).
- Initial design and later maintenance and development of job and opportunity tracking web and database application in Perl (1995-2000).
- Parser for SGML course content DTD in C++ (1994).

### System Administration and Networking

- In depth experience with all major UNIX vendors (1993-2000) and several Linux distributions (1993-2006).
- Specialized in cutting edge (at the time) assignments such as disk mirroring, heterogeneous networks, and performance monitoring.
- Proficiency with all major internet protocols and their UNIX implementations including NFS, SMB/CIFS, NIS(+), LDAP, DNS, SMTP, POP, IMAP, HTTP, HTTPS, SSH, FTP, BOOTP, TFTP, DHCP.
- Experience configuring servers and workstations, setting and implementing security policy, and providing software development support in a heterogeneous network simultaneously running 7 UNIX versions, Macintosh, and MS-Windows.
- Provided security audits and white-hat cracking services, designed and implemented customized firewalls, and diagnosed network and system performance problems where other experts had failed.

### Courses Taught, Curriculum Development, and Other

- Conferences: PyCon tutorials *Python 101* and *Python 102* at PyCon 2008 – 2011, tutorial *Python Epiphanies* at PyCon 2012. Talk on *Python in the Enterprise* at PyCon 2009. PyCon Tutorial Coordinator 2011 - 2012.
- University Courses: Introduction to Computer Science I and II (Python and Java), Discrete Math, Assembly Language (MIPS), Computer Ethics, Computer Applications I and II, Network Security and Firewalls.
- Industry: Python, Java, Perl, C++, C, Code Reviews, Unix System Administration
- Initiated and organized the Winnipeg Python Users Group from 2006 to present.