Nicholas Pilon

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OBJECTIVE

I want to do interesting things. I want to create tools and works that people can be passionate about, that make them stop and think and say "That's clever!" I want to help make computers a more transparent part of the lives of ordinary people, and make them more accessible as tools to people who just want to get work done.

EDUCATION

Dalhousie University, Halifax, NS MCS, Master of Computer Science, September 2004 May 2008

Dalhousie University, Halifax, NS BCS, Bachelor of Computer Science with GPA 4.01, September 2000 October 2004.

RESEARCH

Masters Thesis: *Refining an Ant-Based Routing Protocol for Mobile Ad-Hoc Networks*. Developed a distributed proactive routing algorithm based on ant foraging metaphors for mobile ad-hoc networks. Tested algorithm under a variety of conditions using a discrete event network simulator built in Python. Tests indicated that the algorithm scaled well with increases in traffic load on the network. Available as a PDF at http://versionthis.com/~npilon/wp-content/uploads/2008/01/masters-thesis.pdf

Undergraduate Honors Thesis: *Implementation of a Poly-Log Dynamic Connectivity Algorithm*. Implemented an algorithm in C++ for efficiently tracking components of a dynamic graph over time. Available as a PDF at http://versionthis.com/~npilon/wp-content/uploads/2008/01/honors-thesis.pdf

WORK EXPERIENCE

Teaching Assistant, Dalhousie Computer Science Learning Centre; Halifax, NS September 2001 - December 2007

Helped students with assignments, concepts, and general coursework, including debugging programs written in a variety of styles to solve many different problems. Worked with other TAs to develop material for and run tutorials and extra information sessions to provide supplementary education to students beyond the normal CS curriculum. Languages supported included Java, C, C++, Python, and Scheme.

Marker for Computer Architecture Class, Dalhousie Computer Science Department; Halifax, NS January 2006 - April 2006

Marked student assignments on computer architecture and assembly language. Aided professor during course labs, helping students understand course material and mistakes in their work. Topics covered included a basic RISC assembly language, boolean logic, digital circuit design, and state machines.

Marker for Theory of Computation Class, Dalhousie Computer Science Department; Halifax, NS September 2005 - December 2005

Marked student assignments on theory of computation, including examining mathematical proofs and computational automata for correctness and evaluating their quality. Topics covered included regular expressions, finite automata, push-down automata, and Turing machines.

Co-op Student, InfoInterActive, Inc; Halifax, NS **January 2003 - April 2003**
Worked with back office team on SQL databases, batch processing, server software, and other support tools for managing customer information and business activity. Wrote software using C++ and Java that had to respect well-defined interfaces and work as part of a large, intricate architecture. Used and developed code generators that transformed XML into SQL or C++ using XSLT. Took part in product and architecture design groups. Worked on library maintenance and debugging.

Freelance Writer/Editor, Dream Pod 9; Montreal QB **July 2002 - December 2007**
Responsible for design, writing, and editing of rules for tabletop miniature games. Assisted in customer relations through company web forum, including answering rules questions, helping new customers, promoting upcoming products, and general community management. Wrote utility software to support development activity.

NSERC (National Sciences and Engineering Research Council of Canada) Undergraduate Research Award Recipient, Dalhousie Computer Science Department; Halifax, NS **May 2002 - August 2002**
Designed and implemented a generic questionnaire administration software system for Palm handheld devices, to be used for field work for medical studies. Fashioned SQL databases for permanent data storage, developed Java conduits using JDBC for synchronization between Palm devices and SQL database, developed Palm software in C with a dynamically-generated user interface.

BUZZWORDS

ant, awk, bash scripting, Boost, C, C++, Cheetah, cvs, darcs, ddd, doxygen, fish scripting, gdb, gnuplot, GTK, *Java* (through 1.4), Java Servlets and JSP, JDBC, LaTeX, Linux, Mac OS X, make, Objective C, Perl, Perl CGI, Perl DBI, *PostgreSQL*, Prograph, Prolog, *Python*, Scheme, sed, *SQL*, SQLAlchemy and Elixir, svn, Sybase, Windows, wxPython, XHTML + CSS, *XML*, *XSLT*

AWARDS

NSERC Postgraduate Scholarship September 2004 - August 2006

NSERC Undergraduate Research Award May 2002 - August 2002

Dalhousie University Renewable Scholarship September 2000 - May 2004

Knowledge House Information Economy Initiative Scholarship September 2000

INTERESTS

Game design (electronic and conventional), writing, serial fiction, editing, copyright law, culture, politics, economics, philosophy, design, community, end-user computing, programming language design, human-computer interaction, free software, distributed intelligence, self-directed learning, intriguing ideas, organization

COMMUNITY INVOLVEMENT

Wrote command-line argument completion scripts for svn and cvs for fish, the Friendly Interactive Shell. Debugged and corrected various problems with fish, including cross-platform interoperability. fish is written in C and its own shell scripting language and distributed under the GPLv2. It can be found at http://fishshell.org/

Developed Loquacious Etymologist, a program for generating words that look and sound like words from an existing language. Written in Python using wxPython for a GUI, distributed under the GPLv3. It can be found online at http://code.google.com/p/loquacious-etymologist/

Designed and developed software for multi-user text-based games using a variety of third-party extension scripting languages. Coordinated other programmers also working on development.