TODD M DESHANE, Ph.D. Candidate
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SUMMARY OF SKILLS

As a graduate student in Computer Science, I am most interested in investigating, deploying, and improving complex, cutting-edge system software, such as virtual machine systems, database management systems, and network security systems. I have also had a lot of experience performing detailed, statistically relevant performance evaluations on systems software, with a focus on virtualization technologies. My experience as a teaching assistant has developed by ability to effectively present my technical research and projects to others. Throughout my education, in particular during my software engineering undergraduate work, I have learned to design, develop, and integrate software in a large team environment. I have also built software that is user-friendly and intuitive by the application of principles from research in human-computer interaction. In my spare time, I contribute to open source projects including Xen.org, Ubuntu, Virtual Machine Builder, and Chromium OS.

EDUCATIONAL BACKGROUND

Doctor of Philosophy in Engineering Science Clarkson University
Expected May 2010
Major in Computer Science
Minor in Information Technology
Current GPA: 3.64

Master of Science in Computer Science Clarkson University
Completed December 2004
Overall GPA: 3.44

Bachelor of Science in Software Engineering Clarkson University
Completed May 2003
Minor in Mathematics
Overall GPA: 3.50

AWARDS AND HONORS

IBM Ph.D. Fellowship – August 2008 to May 2009
Awarded tuition, fees, and a stipend of $17,500 for one academic year in this worldwide competitive program

IBM Ph.D. Fellowship – August 2007 to May 2008
Awarded tuition, fees, and a stipend of $17,500 for one academic year in this worldwide competitive program

Miller/Davis Service Award – Spring 2006
Awarded for outstanding service in the Department of Mathematics and Computer Science

First Place Team in 2005 UNISYS TuxMasters Invitational – August 2005
Won prizes totaling over $70,000 and a trip to LinuxWorld in San Francisco, CA

Phalanx Commendable Service Award – Spring 2005

Pi Mu Epsilon (PME) Honorary National Mathematics Society – Since Spring 2005

Eta Kappa Nu (HKN) Electrical Engineering Honor Society – Since Fall 2002

Ronald E. McNair Scholars Summer Research Program – Summer 2002

PUBLICATIONS

W. Hu, T. Deshane, and J. Matthews.
Solaris Virtualization Options. USENIX ;login Volume 33, Number 5. October 2008.

J. Matthews, E.M. Dow, T. Deshane, W. Hu, J. Bongio, P.F. Wilbur, and B. Johnson.
Running Xen: A Hands-on Guide to the Art of Virtualization. Prentice Hall. April 2008.
http://runningxen.com

T. Deshane.
System Support for Rapid Recovery and Attack Resistance. Ph.D. Proposal. August 2007.

T. Deshane, W. Hu, P. Jablonski, H. Lin, C. Lynch, and R.E. McGregor.
Encoding First Order Proofs in SAT. 21st Conference on Automated Deduction (CADE-21). July 2007.

J. Matthews, W. Hu, M. Hapuarachchi, T. Deshane, D. Dimatos, G. Hamilton, M. McCabe, and J. Owens.
Quantifying the Performance Isolation Properties of Virtualization Systems. Workshop on Experimental Computer Science (ExpCS). June 2007.

J. Matthews, J. Herne, T. Deshane, P. Jablonski, L. Cherian, and M. McCabe.
Data Protection and Rapid Recovery from Attack with a Virtual Private File Server and Virtual Machine Appliances. IASTED International Conference on Communication, Network and Information Security (CNIS 2005). November 2005.

T. Deshane, P. Jablonski, K. Roberts, and J. Matthews.
Web-Based Collaborative Exploration and Characterization of Large Databases. International Journal of Technology, Knowledge and Society. February 2005.

T. Deshane.
Web-based Collaborative Exploration and Characterization of Large SQL Databases. Masters Thesis. December 2004.

B. Clark, T. Deshane, E. Dow, S. Evanchik, M. Finlayson, J. Herne, and J. Matthews.
Xen and the Art of Repeated Research. USENIX 2004 Annual Technical Conference, FREENIX Track. June 2004.

T. Deshane and A. Venkatraman.
Transmitting and Tracking Packets of Data through the TCP and UDP Network Protocols. Symposium on Undergraduate Research Experiences (SURE). Ronald E. McNair Research Program. Summer 2002.

SELECT PRESENTATIONS

T. Deshane.
System Support for Rapid Recovery and Attack Resistance. ATC-NY Friday Talk. Ithaca, NY. August 8, 2008.

T. Deshane.
Quantitative Comparison of Xen and KVM. Xen Summit. Sheraton Boston Hotel. Boston, MA. June 23, 2008.

T. Deshane, P.F. Wilbur, and S. Spector.
S4: Introduction to the Open Source Xen Hypervisor. USENIX 2008 Annual Technical Conference, Training Track. Sheraton Boston Hotel. Boston, MA. June 22, 2008.

T. Deshane.
An Example-Driven Look at the Rapid Recovery System. Computer Science Seminar. Clarkson University. December 7, 2007.

T. Deshane.
Rapid Recovery System. Research Poster Presentation. Cyber Security Awareness Week (CSAW). Polytechnic University. Brooklyn, NY. December 4, 2007.

T. Deshane.
System Support for Rapid Recovery and Attack Resistance. Electrical and Computer Engineering Seminar. Clarkson University. September 27, 2007.

T. Deshane.
System Support for Rapid Recovery and Attack Resistance. Ph.D. Proposal. August 9, 2007.

T. Deshane.
Towards an Attack-Resistant Desktop. Computer Science Seminar. Clarkson University. April 26, 2007.

T. Deshane.
High Availability of Virtualized Desktop Applications. Computer Science Seminar. Clarkson University. December 7, 2006.

T. Deshane, S. Evanchik, and J. Matthews.
Xen and the Art of Repeated Research. USENIX 2004 Annual Technical Conference, FREENIX Track. Boston Marriott Copley Place. Boston, MA. July 2, 2004.

WORK EXPERIENCE
Research Assistant Clarkson University - January 2010
* Implemented biometrics statistical algorithms in Java to supplement a biometrics textbook

Vantage Learning - Summer 2008
* Virtualization consulting and server hardware research
* Testing and deployment of Xen for use in a production environment

IBM Xen Extensions Speed Team in the Linux Technology Center (LTC) - Summer 2006
* Proof of concept for a managed virtual data center based on IBM's Blade Center and Network Attached Storage using the Xen hypervisor.
* Storage management interface to IBM DS300
* Persistent naming of devices for Linux with open-iscsi

Teaching Assistant Clarkson University – Fall 2004 to Spring 2007
* Operating Systems – Spring 2007: lab sessions, office hours, grading
* Calculus I – Fall 2004, Fall 2005: recitations, office hours, grading
* Computer Science I – Spring 2005, Spring 2006, Fall 2006: lab sessions, office hours, grading

Student Director of the Internet Teaching Laboratory Clarkson University

* Lead research projects such as IPv6, Voice over IP, and Lab Management Team
* Administer web, database, and file servers running various operating systems
* Maintain and deploy the Windows software build on 30 dual booting lab computers

Software Developer and Contract Consultant Haenel Communication Technologies
* Developed database for Student Management System, application development
* Consulted with client problems: server and network configuration

Network Technician and Helpdesk Support Clarkson Office of Information Technology
* July 1999 through May 2003
* Ran network cable, configured Cisco switches, Helpdesk support
* Solved computer and network problems in faculty/staff offices and student dorms

VOLUNTEER ACTIVITIES
* Symposium on Operating Systems Principles (SOSP) 2009 Webmaster
  - Redesigned web layout and correspond with various parties to keep site up-to-date
* BOCES Teaching Assistant
  - Taught Computer Science topics to high school students
* Project Challenge Teaching Assistant Spring 2005, Spring 2006, Spring 2007
  - Taught Computer Science topics to high school students
* Lending Cupboard Helper
  - Entered data of borrowed items, moved furniture, cleaned and organized items

PAST SOFTWARE ENGINEERING PROJECTS
* BDAP Explorer and the BGP Data Analysis Project (BDAP)
  - Developed the BDAP Explorer as an instance of the Generic Database Explorer to explore and characterize large data sets
  - This project submission won the 2005 UNISYS TuxMasters Invitational
  - Collaborated with 3 McNair Scholars to establish databases to study the Internet

* Public Media Manager Content Management System
  - Developed database and application for North Country Public Radio

* Online Quiz Application
  - Worked on database interface 4-person team and integrated with GUI team

* Point of Sales (POS) Application
  - Focused on user-friendly front-end to integrate with backend database

* Instant Messenger
  - Worked with a team to develop network module for a client-server application

* Online Movie Store
  - Worked with a team to develop network module for a client-server application
  - Implemented using an Oracle database and PHP front-end in 3-person team

* Elevator Simulation
  - Familiarized with working elevator logic to develop object-oriented simulation
  - Microsoft Foundation Classes (MFC) Paint, Timer, and Document Analyzer
  - Designed and developed event-driven paint, timer, and document analyzer applications

* Text-based Solitaire Game

- Adapted Java GUI into console-based C++ application in 2-person team

PROGRAMMING EXPERIENCE
80X86 Assembly, C, C++, Java, J2EE, PHP, Perl, Python, CGI, HTML, CSS, JavaScript, Prolog, Bash Scripting, UNIX Utilities, SQL, MySQL, MFC, PerlTk, OpenGL/Glut

OPERATING SYSTEMS KNOWLEDGE
Ubuntu Linux, Gentoo Linux, Red Hat/Fedora Linux, Microsoft Windows, VMware, Xen, Virtual Machines, GoogleFS, Andrew File System (AFS), Log-structured File System (LFS)

PROFESSIONAL SOCIETIES
* Association for Computing Machinery (ACM), Clarkson Chapter – Since Fall 2003
  - Interim President Fall 2003, promoted sharing and discussing of computing ideas

* Advanced Computing Systems Association (USENIX) – Since Fall 2003

* Institute of Electrical and Electronics Engineers (IEEE) – Since Fall 2002

CLUBS AND ACTIVITIES
* Graduate Student Association (GSA) – Since Fall 2003
  - President, Vice President, Member of Steering Committee, Co-founded Services Committee

* Internet Teaching Laboratory (ITL) and Networking Club – Since Fall 2001
  - Teach students about networking hardware and software available in the lab
    - Local high school students in the Project Challenge program
    - Clarkson students taking introductory networks course
  - Promote ITL to prospective students and parents as Open House representative

* Clarkson Open Source Institute (COSI) – Since Fall 2003
  - Worked on lab management team to maintain Linux computers
  - Promoted COSI projects as a member of the public relations team

* Health and Physical Fitness
  - Participate in Intramural Hockey, Broomball, and Softball – Since Fall 1999
    - Hockey team representative Spring 2005
    - Softball team representative Fall 2004

* Clarkson Radio WTSC 91.1 FM "The Source"
  - Disc Jockey, Co-host of the "Common Sense Computing" and "Northern Light" radio shows