

Daniel Smullen

Curriculum Vitae

EDUCATION

Ph.D. **Software Engineering & Computer Science (In Progress)**

Carnegie-Mellon Institute for Software Research, etc. 2019

B.Eng. (Honours) **Software Engineering**

UOIT (Canada), Graduated *Summa cum Laude*, 2014

RESEARCH & INDUSTRY EXPERIENCE

SEPTEMBER 2013 TO MAY 2014

Researcher

UOIT Software Quality Research Lab

Investigated user privacy in metadata released unknowingly through Internet traffic, and perceptions thereof in an ethics board approved user study. Also conducted a novel investigation of the Software Testing Coupling Effect using a variety of mutation testing tools and automation.

APRIL TO SEPTEMBER 2013

Researcher

UOIT Software Engineering Lab

Studied tinyOS based wireless sensor networks, applying policy-based programming to create a new development environment (Policy IDE). Server-based and console-based variants using IPv6 running on embedded systems were also created. Published and presented at EUSPN-2013 (Elsevier). Poster presented at UOIT Student Research Showcase 2013.

APRIL TO SEPTEMBER 2012

Engineer-In-Training Co-Op

SNC-Lavalin, Global Information Technologies

Conducted research on mission-critical datacenter systems, analyzing network traffic and file system logs toward better disaster recovery, and infrastructure improvement planning. Developed a novel workstation staging system, reducing the time for new workstation deployments (from 160 minutes down to 20 minutes).

APRIL TO SEPTEMBER 2011

Support Technician

SNC-Lavalin, Mining and Metallurgy

Provided technical support for high value clients in engineering departments and senior management, performing computer forensics, data recovery, and system troubleshooting. Conducted seminars on security and system repair using open source software.

JUNE TO DECEMBER 2009

DESSAU (LVM-Technisol)

Implemented information systems developed for JEGEL, managing sample logging and lab process queuing. Gained comprehensive field experience in geotechnical and QA testing for concrete and asphalt. Oversaw integration of computer systems during the JEGEL/LVM merge.

APRIL TO JUNE 2009

JEGEL

Worked as assistant project manager, laboratory and office systems administrator. Worked with City of Toronto on special projects (Trans-Canada Highway Rehabilitation, Toronto 2009 Capital Works Program). Performed collaborative development on an ISO certified laboratory sample management software. Designed and built a datacenter servicing the Toronto engineering team.



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SELECTED REFEREED WORKS

D. Smullen, et al., "Genetic Algorithm with Self-Adaptive Mutation Controlled by Chromosome Similarity," The IEEE World Congress on Computational Intelligence (Beijing, China), 2014

D. Smullen, et al., "IRIS - Incident Recognition and Intelligence System," (Autonomous Highway Surveillance System) Capstone Research Project, 2014 *First Place in UOIT Capstone Competition 2014*.

J. Gillett, J. Heron, **D. Smullen**, "How Much Do We Reveal Through Metadata? An Assessment of Online Privacy," Poster, IBM Consortium for Software Engineering Research, 2013

N. Qwasmi, **D. Smullen**, R. Liscano, "Integrated development environment for debugging policy-based applications in wireless sensor networks," The 4th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (Niagara Falls, Canada), 2013

D. Smullen, "Facilitating the Internet of Things with Policy Programming," Poster and Presentation, UOIT Student Research Showcase, 2013

Policy IDE, TOSServ, Finger2IPv6 Projects, tinyOS Community Wiki, Stanford University

SneakyFS file system design and implementation.
Special recognition for best project in UOIT ENGR3950.
Supervisor: Dr. K. Sartipi, P.Eng.

Military logistics management and large-scale visualization system for UOIT ENGR3700. Supervisor: Dr. E. Al-Masri

Mission-critical datacenter utilization, availability, and performance assessment for SNC-Lavalin GIT risk management and infrastructure remediation. Supervisor: M. Ross, Senior Vice-President

2009 Trans-Canada Highway Rehabilitation Geoinformatics.
Supervisor: A. Duclos, P.Eng.

ISO 9000 certified Laboratory Information Management System (LIMS) for JEGEL internal use. Supervisor: Dr. J. Emery, P.Eng.

AWARDS

2014 **EECS Undergraduate Capstone Design Challenge Winner - 1st Place**
University of Ontario Institute of Technology

2012 - 2014 **President's Honors List**
University of Ontario Institute of Technology

2013 **NSERC (Canada) Undergraduate Student Research Award**

2011 **Dean's Honors List**
University of Ontario Institute of Technology

2007 **Winner, DaVinci Engineering Design Challenge**
University of Toronto

MEMBERSHIPS AND CURIOS

Language Proficiency in English, French, German

IEEE, est. 2013

Student Member

Red Cross, est. 2011

Emergency First Aid, CPR and Defibrillator (Class C)

Burlington Rifle & Revolver Club, est. 2009

Range Officer and Full Member