Greta Cutulenco

Software Engineer
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WORK EXPERIENCE

Undergraduate Research Intern, University of Waterloo, September – December 2013

- Explore methods of statistical analysis of system traces to analyse system behaviour
- Research and develop dynamic visualization methods for the analysis of system information
- Use developed analysis methods for variation detection among traces
- Integrate the developed visualization and analysis methods with QNX system trace analysis

Systems Engineer, AECL, Chalk River, Canada, January – April 2013

- Analyzed cyber security vulnerabilities of a safety-critical plant display system
- Explored the applications of augmented microkernel messages for safety purposes
- Evaluated the addition of augmented messages to a QNX based display system ACCIS *(Advanced Control Centre Information System)*

Developer, Chango, Toronto, Canada, May – August 2012

- Developed dashboards for management of large quantities of advertisement data
- Used latest web technologies to implement efficient client-side data displays
- Facilitated implementation and integration of Selenium testing framework

Environment: Python, Django, RESTful web services, SQL, JavaScript, JQuery, Highcharts.js

Developer, T2VSoft, Dalian, China, August – December 2011

- Developed a web application to facilitate financial transactions and data management
- Developed portals for supplier and distributer claim management

Environment: C# .NET, ASP .NET, MySQL, OOP design, TFS, database migrations

Software Engineering Intern, Qualcomm, San Diego, United States, January – April 2011

- System integration: combined system sub-components, ensuring compatibility
- Tested for errors in functionality and performance of the system, including stress testing
- Tested software on wireless mobile modems (LTE, WCDMA protocols)

Environment: Perl, CrashMan, makefiles, measurement/ diagnostic tools (Agilent, scripts)

Business/ Systems Analyst, Toronto Transit Commission, Toronto, Canada, May – Sept. 2010

- Designed and deployed various IT department Intranet sites
- Developed web parts for the Microsoft Office SharePoint Server 2007

Environment: HTML, JavaScript, Visual Studio, Oracle Primavera, and MS Project

RESEARCH PROJECTS

Brain Simulator Parallelization, University of Waterloo, October 2012 – present

- Contributing to the ongoing *Brain Simulation* research at the Centre for Theoretical Neuroscience
- Improving the simulator performance through parallelization and distribution

Environment: Python (multiprocessing, Theano), ZeroMQ

Undergraduate Research Assistant, University of Waterloo, May 2013 – August 2013

- Contributed to trace analysis research with the Real-time Embedded Software Group
- Developed visualizations of system behaviour using D3.js library

Environment: D3.js, R

mTags Lifeline Visualisation, University of Waterloo, September 2012 – December 2012

- Contributing to the ongoing *mTags: QNX Microkernel Messages with Metadata* research with the Real-time Embedded Software Group
- Visualized tag propagation data using web libraries D3.js and Highcharts.js

Environment: D3.js, Highcharts JS, Backbone.js, Python

EDUCATION & AWARDS

Master of Applied Science, University of Waterloo, May 2014 - present

NSERC Undergraduate Student Research Award, 2013 - 2014

Honours Bachelor of Software Engineering, University of Waterloo, 2009 - 2014

University of Waterloo President's Scholarship, 2009 - 2010

High School Diploma, Langstaff Secondary School, Richmond Hill, June 2009

Certificate for Achievement in Scientific Research, AECL Chalk River Laboratories, Deep River, Ontario, August 2007

ACTIVITIES

Women in Computer Science (WICS) Committee Member, University of Waterloo, October - December 2013

VeloCity Entrepreneurship Program Participant, University of Waterloo, January – Dec. 2012

CSters Mentor, University of Waterloo, September – December 2011, mentor first year Computer Science and Software Engineering students

Lifeguard and Swimming Instructor, developed excellent leadership and communication skills

UNIVERSITY PROJECTS:

Real-time Operating System, developed a preemptive kernel using C for an ARM processor

- Implemented memory management, process scheduling and a simple shell
- Tested using user and system processes, including load testing through memory depletion

Straights Card Game, C++ program using OOP design patterns

Calculator, assembly language program for a MCF5200 ColdFire microprocessor