ALEXANDER MURASHKIN
University of Waterloo, MMath

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Professional Knowledge and Skills

Client-server architecture and website development skills	Javascript, AJAX, JQuery, Node.JS, Angular.JS, D3.js, Zend Framework, Drupal CMF, PHP, SQL, HTML, CSS
Desktop/standalone application development	Java, Maven, Microsoft Visual C#, WPF, Delphi
Operating system design, real-time and embedded system programming	C language, micro-kernel design, Märklin Digital Interface, ARM and Intel assembly languages
Mobile application development	Android Platform, Windows Phone 7, SQLite
Game development and computer graphics	OpenGL, Physics/Math skills, computational geometry
Domain, feature and architectural modeling	UML, SysML, AADL, Clafer language
IDEs and version control systems	Git / GitHub, Eclipse, Sublime Text

Higher Education

2012 – Aug.2014 (expected)	**MMath** in Computer Science, **University of Waterloo**, Waterloo, ON, Canada**.** Average: 93 / 100
2008 – 2012	**BSc** in Computer Systems and Software, Kazakh-British Technical University, Almaty, Republic of Kazakhstan. Average: 3.97 / 4.00.

Work Experience

Sept 2012 – Aug 2014 (expected) **University of Waterloo** Waterloo, ON, Canada	**Graduate Research Assistant and MMAth Student** - Designed a web-based tool set for domain modeling, instantiation, visualization and exploration of variability models (*Node.JS, JQuery*): - The tool set is being used by researchers and were published and presented at SPLC'13, Tokyo, Japan. See https://www.student.cs.uwaterloo.ca/~amurashk/index.html#show/project/claferwebtools - Designed a real-time operating system kernel and a real-time application on top of that (*C, ARM Assembly language*): - The project scored high, the application controlled two trains moving around the track with successful collision avoidance - The system could self-restore after hardware controller's reboot - Two projects are in progress: - Early design exploration of E/E (electronic/electric) architectures as a part of NECSIS (http://www.necsis.ca/) with General Motors - Optimization of safety level allocation in safety-critical components of automotive systems
Oct 2013 – Dec 2013 **Pratt & Whitney Canada** Longueuil, QC, Canada	**Research Intern** - Investigated architectural patterns for modeling system and control software variability in product lines - As a team, designed a SysML model of engine parts and successfully demonstrated it in the company as a proof of concept

June 2011 **–** Dec 2011
Kazakh-British Technical University
 	
Almaty, Kazakhstan
	BSc Student and Senior Specialist
	● Developed software components for Microsoft Imagine Cup project: an emergency management system with drones (*WPF, C#, Windows Phone 7*)
	    ○ Top 20 at Microsoft Imagine Cup World Finals 2014, Australia
	● Developed International School of Economics and Social Sciences website (*Drupal CMF, PHP, Javascript, HTML*)
	    ○ Was the official school website for three years
	● Created an online file and document sharing system (*Zend Framework*)
	    ○ Successfully used by faculty and staff for doing paper work

Achievements and Awards

2012	*Microsoft Imagine Cup 2012, local finals* – 1st place *"Red Diploma" - a diploma with Honours* – for perfect academic achievements
2011	*Android Hackathone competition*, Almaty Google Technology User Group, 1st place *Microsoft Imagine Cup*, local final, 2nd place *International Student Competitions of IT Projects,* Kazakh-British Technical University, "Multimedia technologies and Game Development" nomination – 1st degree diploma, "Web Applications and Database Design" nomination – grand prize
2010	*International Competitions of IT Projects*, Kazakh-British Technical University, 3rd degree diploma The scholarship named after the President N.Nazarbayev for perfect academic achievements
2009	*IT Project Competitions,* Kazakh-British Technical University, 2nd degree diploma
2008	*Intel Excellence in Computer Science Award* for the project "Paper-based test generating computer application" *State Education Grant* (scholarship) and *Golden Medal* for perfect academic results *"Daryn" Junior Science Competition*, Computer Science section, 1st degree diploma *Scientific project competition,* the Small Academy of Sciences, 1st degree diploma

Conferences and Events Attended

1. 17th International Software Product Line Conference 2013, Tokyo, Japan	as a paper author
2. Summer School on Cyber-Physical Systems 2013, Grenoble, France	as a participant
3. Microsoft Imagine Cup 2012, World Finals, Sydney, Australia	as a competition participant
4. Google Developer Day 2011, Moscow, Russia	as a winner of a local Hackathone by Google Technology User Groups

Publications

Murashkin, A., M. Antkiewicz, D. Rayside, and K. Czarnecki, **"Visualization and Exploration of Optimal Variants in Product Line Engineering"**, Software Product Line Conference, Tokyo, Japan, 2013
Antkiewicz, M., K. Bąk, **A. Murashkin**, R. Olaechea, J. Liang, and K. Czarnecki, **"Clafer Tools for Product Line Engineering"**, Software Product Line Conference, Tokyo, Japan, 2013.

Interests

Board games, chess, bicycling, Physics and science in general