

# ALEXANDR MURASHKIN

University of Waterloo, MMath in Computer Science Candidate

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## PROFESSIONAL KNOWLEDGE AND SKILLS

- Web-based development Javascript, JQuery, Node.JS, Angular.JS, Zend, ASP.NET, PHP
- Desktop application development Java, Maven, Microsoft Visual C#, WPF, Delphi
- Operating- and real-time system design C, micro-kernel design, ARM and Intel assembly languages
- Mobile application development Android, Windows Phone 7, SQLite
- Database design and data programming SQL, Hibernate, ADO.NET Entity Framework
- Game development OpenGL, Unity 3D, Cinema 4D, Physics/Math skills

## HIGHER EDUCATION

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

## WORK EXPERIENCE

### Graduate Research Assistant at the University of Waterloo (Sept 2012 – Aug 2014)

1. Designed [Clafer Web Tools](#) – web-based tools for domain modeling, instantiation, visualization and exploration of variability models (*Javascript, Node.JS*)
  - Tools are successfully used by the research lab and students
  - Two ACM publications presented at Software Product Line Conference 2013, Tokyo, Japan
2. Designed a [real-time operating system kernel](#) and a multi-thread application on top of it (*C, Assembly*)
  - Two trains moved around the track with successful collision avoidance
  - Self-restore after hardware controller's faults or reboot
3. Working on early design exploration of electronic/electric architectures, [NECSIS](#) project with General Motors
4. Exploring optimization of safety level allocation in safety-critical components of automotive systems

### Research Intern at Pratt & Whitney Canada, Longueuil, QC, Canada (Oct 2013 – Dec 2013)

1. Investigated architectural patterns for modeling system and control software variability in product lines
2. Successfully designed and demonstrated SysML models of engine parts

### BSc Student at Kazakh-British Technical University, Almaty, Kazakhstan (Sept 2008 – May 2012)

1. Developed software for [Archangel](#) emergency management system (*WPF, C#, ASP.NET, Windows Phone 7*)
  - Top 20 at Microsoft Imagine Cup World Finals 2012, Sydney, Australia
2. Designed and implemented [RX4](#) – a computer game engine (*OpenGL, Delphi*)
  - 1<sup>st</sup> place at «Game Development and Multimedia», International IT Projects Competitions 2011
3. Developed small and medium course projects

### Senior Specialist at Kazakh-British Technical University, Almaty, Kazakhstan (June 2011 – Dec 2011)

1. Developed [International School of Economics and Social Sciences website](#) (*Drupal CMS*)
  - Was the official school website for three years, recognized by students and faculty
2. Created an online [file and document sharing system](#) (*Zend Framework, PHP*)
  - Successfully used by university faculty and staff for online paper work

## OTHER ACHIEVEMENTS

- Won the local Android Hackaton 2011 by Google Technical User Group (an Android OpenGL-based game)
- Completed Bachelor's studies with «Diploma with Highest Honors» for perfect academic achievements
- Received full grant for BSc education and the scholarship named after the Republic's President (2011)
- Grand prize at «Web Applications and Database Design», International IT Projects Competitions 2011
- Intel Excellence in Computer Science Award for «Paper-based academic test generating software» (2008)