

# Alaa Azazi

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## EDUCATION

### Master of Science (M.Sc.) – Computer Science

University of Calgary

- **GPA 4.0/4.0**
- Area of concentration: *Probability Models for Spatial Awareness in Ubiquitous Environments*

Sep 2014 – Aug 2016

### Bachelor of Science (B.Sc.) – Double Major in Computer Science & General Mathematics

University of Calgary

- Graduated **with Distinction**. Senior **GPA 3.82/4.0**
- Honours thesis: *Evaluating Spatial Awareness in Multi-Surface Environments*

Sep 2010 – Apr 2014

### Diploma of Information Technology (Network Systems Major)

SAIT Polytechnic

- Graduated **with Distinction**. **GPA 4.0/4.0**

Sep 2008 – Apr 2010

## SELECTED PROJECTS

### Society of Devices (SoD)

An Experimental Cross-Platform Framework for Achieving Spatial Awareness in Ubiquitous Settings

- Directing and aiding in the development of the framework in Node.js and C#



### Multi-Surface Environment API (MSE-API)

An API for Constructing Interactive Ubiquitous Systems

- Developed a scalable algorithm for combining input from multiple Microsoft Kinect sensors
- Implemented a spatial engine and a remote locator service in C# and Objective-C



### Multi-Surface Emergency Response System (ePlan)

A Multi-Surface Environment for Emergency Response Planning Exercises

- Implemented a distributed and portable Emergency response application for Microsoft Surface and iOS platforms in Microsoft .NET and Objective-C respectively



### Alerts

A System for Families and Friends to Communicate during Emergencies

- Implemented the mapping and gesture-recognizer components of the display application using Microsoft Kinect SDK and Bing Maps API in C#



### #Politik

An Interactive Visualization of Canadian Political Parties' Performance

- Implemented the mapping service and the communication module using ArcGIS JavaScript API and Node.js



## SELECTED ACHIEVEMENTS

### Alberta Innovates Technology Futures Master's Scholarship, Alberta Innovates

- Received a fully paid two-year M.Sc. scholarship at the University of Calgary

Sep 2014 – Aug 2016

### Dean's List – Faculty of Science, University of Calgary

Jul 2013, 2014



### Microsoft Coding Contest, Microsoft Corporation

- Placed **second** in the competition held at the University of Calgary

Feb 2013



### Cisco Net Riders Networking Competition US-Canada 2009, Cisco Networking Academy

- Achieved **first** place in Alberta, and **third** in Canada

Nov 2009

### The Nexen Inc. Scholarship, Nexen Inc.

- Received a fully paid six-year scholarship to complete my undergraduate education at the Southern Alberta Institute of Technology and the University of Calgary

Aug 2008 – Jun 2014

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## SKILLS

### Programming Languages

- **Expert in:** C++, C#, Java, Objective-C, Android, Node.js, and JavaScript
- **Working Knowledge in:** C, Python, Bash, Unity, SQL, R, and MATLAB

### Web Technologies

- Experienced with web technologies such as REST, XML, and JSON

### Networking & Computer Communications

- Strong knowledge of the TCP/IP stack, and TCP/UDP socket programming
- Working knowledge of cloud fundamentals and service models

### Software Design

- Experienced in Object Oriented Software Analysis, Design Patterns, and Agile Methodology
- Excellent knowledge of data structures and algorithms

### Additional Skills

- A knowledge seeker who's most interested in exploring and learning novel, cutting-edge technologies
- Resolved in-depth queries in a methodical manner to find appropriate solutions that achieve efficiency and the highest level of quality
- Met deadlines consistently, and managed to complete all assignments and projects at school in advance achieving a high GPA while working part time
- Enjoy sharing knowledge and working with others to achieve team goals

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## EXPERIENCE

### Software Engineer

**Jul 2016 - Current**

VizworX Inc.

- Designing and implementing a platform for creating customized collaborative geospatial data solutions, with support for web, iOS and Windows desktop platforms

### Mobile Software Engineer (iOS)

**Jul 2015 – Aug 2016**

Physio4D

- Designed and implemented an algorithm for detecting the user's posture using the live video feed from the device's camera to provide corrective guidance using OpenCV framework
- Created a custom 3D exercise modelling tool for displaying and manipulating the rotation, zoom, perspective, and texture of physiotherapy exercises using SceneKit framework
- Implemented a real-time agent to analyze the user's posture data, providing live analytic feedback to the user
- Created the complete design and UI of the application using UIKit framework for both portrait and landscape modes

### Graduate Research Assistant

**Jan 2013 – Aug 2016**

Agile Surface Engineering Lab – University of Calgary

- Used Agile software development methodology to define problems, gather requirements, develop estimates, and build advanced prototypes of multiple industry-oriented software applications
- Organized weekly scrum meetings, providing technical direction and decision process for all aspects of research methodology, application development, and infrastructure
- Provided direction and interaction with the undergraduate developers' daily tasks and projects

### Teaching Assistant

**Sep 2014 – Apr 2016**

Department of Mathematics & Statistics | Department of Computer Science – University of Calgary

- Provided tutorial instruction in the subject areas covered in a number of Computer Science and Mathematics courses, including Introductory Calculus, Linear Methods, and Analysis and Design of Large Scale Software

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## INTERESTS

- **Creative:** Problem solving and Programming contests (UofC Problem Solving Club, Microsoft Coding Contests, Google Code Jam, ACM Programming Contests)
- **Travel:** Recent trip to Bali
- **Sports and Recreation:** Soccer (University intramurals team captain), Hiking, Table Tennis (SAIT Res. Champion '09)