

SUMMARY STATEMENT

Experienced embedded software engineer with a desire to create products that delight users. Have developed software that has been released to millions of users, shipped multiple consumer electronics products, and have experience working with Chinese manufacturing.

KEY SKILLS

- Excellent teamwork and leadership skills
- Experience with Agile and SCRUM
- Strong architectural design abilities
- Experience with designing for test fixtures
- **Languages:** C, C#, C++, Objective C
- **Recent Processors:** ST, Nordic
- **Robotics Standards:** JAUS, ROS
- **Wireless Technologies:** Bluetooth Low Energy (BLE)
- **Image Processing:** OpenCV
- **Debugging:** Logic analyzer, Multimeter, Oscilloscope
- **Data analysis tools:** R, Matlab, Excel
- **Task Tracking:** Jira, Rally
- **Source Control:** Git, SVN

EDUCATION

MASTER OF SCIENCE

University of Toronto | Sept 2013 - June 2015

- Computer Science with Human Computer Interaction Specialty
- Relevant Courses: Machine Learning, Intelligent Image Processing, Mobile and Pervasive Computing
- Supervised by [Prof. Daniel Wigdor](#)

BACHELOR OF APPLIED SCIENCE

University of Waterloo | Sept 2007 - April 2012

- Honors Systems Design Engineering (Co-op) with an Option in Cognitive Science

PRO BONO WORK

July 2015 - Sept 2015 | Charlotte, NC
[ACM UIST Student Innovation Contest](#)

VOLUNTEER

Contestants were competing to develop software and hardware tools for children to learn about and build animatronics shows; I created instructions for setup of the kit of parts and 3D models of components to build basic animatronic puppets

Oct 2013 - April 2014 | Toronto, ON
[UTCA Volunteer Consulting Group](#)

CONSULTANT

Analyzed current state of an NGO through review of internal documents, executive interviews, member surveys which resulted in recommendations for organizational restructuring

RABIA ASLAM

EMBEDDED SOFTWARE ENGINEER

EXPERIENCE

Jan 2015 - Present | Boulder, CO

[Sphero](#)

FIRMWARE ENGINEER

- Shipped Force Band™, and Star Wars™ astromech droids R2-D2™ and BB-9E™
- Took products from idea to design to production to maintenance phases
- Developed functional tests and testing with test fixtures for production
- Worked with various on-board sensors like the gyro and accelerometer to identify gestures and other external states of the device
- Developed an ad-hoc network over BLE for multiple devices to exchange data

Sept 2013 - June 2015 | Toronto, ON

[University of Toronto, Dynamics Graphics Project Lab](#)

HUMAN COMPUTER INTERACTION RESEARCHER

- Studied tangible embodied interaction
- Built digital and tangible prototypes focusing on software, hardware and industrial design, developed in Objective C and C++
- Performed user studies to understand user perception and preferences with regards to the novel interactions presented
- See project overview: <http://rabiaaslam.com/the-force/>

May 2011 - Aug 2011 | Ottawa, ON

[CAE Inc., Modeling & Simulation and Human Factors Teams](#)

HUMAN FACTORS INTERN

- Conducted market research regarding new simulation technologies in order to identify product development opportunities
- Assisted with interaction design of a defense mission planning tool using human factors principles
- Developed a plugin (in C++) to externally control a vehicle within a Virtual Battlespace 2 scenario using JAUS

Sept 2010 - Dec 2010 | Toronto, ON

[Defense Research and Development Canada, Human Systems Integration Group](#)

RESEARCH ASSISTANT

- Acquired, installed and troubleshot the Mixed Initiative Experimental (MIX) Testbed utilized in the research of Human Factors considerations in human-robotic interaction
- Investigated and documented the MIX Testbed system architecture to facilitate future development and integration of physiological sensors like the EEG, EMG, galvanic skin response, etc.
- Developed software and assisted in integration for the control of experimental stimuli presented during simulated unmanned aerial vehicle (UAV) ground control station experiment, utilized Visual Basics

Jan 2010 - April 2010 | Toronto, ON

[IBI Group, Toll Systems Team](#)

SOFTWARE DEVELOPER

- Created maintenance oriented mobile application for the iPhone (Objective C) to improve mobility of toll system employees, gained extensive exposure to iPhone user interface design
- Responsible for the device integration of the bill acceptor, a component of the automatic payment machines used in IBI toll systems, utilized Visual C#