ANDREW GERMAN

M.Sc. Computer Science
Software Engineer

Toronto, Ontario

andrewgerman.com

416.209.4685

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highlights of qualification

- Mobile technology and consumer electronics enthusiast
- Passionate about design, user experience, pixel-perfect UI, and code testability
- Proficiency in
  - Programming Languages including: **Objective-C, Swift, C, Go, Java**
  - Scripting Languages: **Lua, Python, PHP, JavaScript, bash**
  - Markup Languages: **XML, HTML, XHTML, RSS**
  - Network Programming: **TCP/UDP sockets, Protocol Buffers, HTTP, and Jabber protocol**
  - Software Frameworks: **Cocoa (iOS, Mac OS X), Metal, OpenGL**
  - Hardware Interfacing: **HID, Microcontrollers (Arduino, PIC)**
  - Database Packages: **SQLite, MySQL, CoreData**
  - Operating Systems: **iOS, Mac OS X, Android, Linux/BSD, Windows**
  - Source Code Version Control: **Git, SVN**
  - Integrated Development Environments: **Xcode, Eclipse**
  - Unit Testing Frameworks: **XCTest/OCUnit/SenTestingKit (iOS), jUnit (Java)**
  - Software Development Methodologies: **Test Driven Development (TDD), Agile, Scrum**

work experience

- **Team Lead**, **Principal Engineer**, Digital Manufacturing Group, **Autodesk** (2015-2016)
  - Team of 6
  - Partnered with Mattel to develop products to showcase uses for 3D Printing in making toys both at home and at scale in factories
    - Developed a Unity application to let kids mix-and-match body parts to make unique figures, ready for printing
    - Developed iOS/Android/Web apps for setup and one-touch-printing of toys using the Mattel ThingMaker 3D Printer
    - Integration and testing with prototype 3D Printer hardware via RESTful APIs

- **Senior Developer**, Autodesk Consumer Group, **Autodesk** (2011-2015)
  - Team of 1 to 8
  - Built iPhone, iPad, Mac applications:
    - Focused on UI, data layer, image processing, and integration with backend services
    - Pixlr-o-matic (iOS)
    - Pixlr Express (iOS)
    - Autodesk Pixlr (Mac)
    - SketchBook Pro (iOS)
  - Prototyping for several unreleased projects
    - Windows app for applying photo filters to images captured using a 3D Camera
    - Education-based sketching app for iOS with rewind and re-play functions using Metal and Swift

- **Mobile App Developer and Embedded App Developer**, Mobile App Team, **Logitech** (2009-2010)
  - Team of 8
  - Built and successfully launched the Harmony iPhone app (version 1.0) to control the Logitech Revue With Google TV set top box.
  - Built and shipped the engine which brought the power of the Harmony Universal Remote Controls (e.g. Harmony 900) to the Google TV platform. This Android Service gave the Google TV platform IR device control as well as Harmony One-Touch Activity control via the Logitech Keyboard and the iPhone and Android phone apps.

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- **Mobile App Developer and Embedded App Developer**, Mobile App Team, **Logitech** (2009-2010) continued
  - Developed Logitech's first proof-of-concept iPhone Universal Remote Control application which demonstrated much better than expected performance for a WiFi-to-IR device control and One-Touch Activity control system.
  - Strong emphasis on performance and pixel-perfect UI elements.
  - Developed using Test Driven Development, the data-driven (XML) Android service which brought the power of the Harmony 900 Universal Remote Control to the Logitech Revue Google TV platform. This system could perform all of Harmony's on-remote business logic and was backed by over 150 unit tests comprising thousands of asserts.

- **Embedded Software Engineer**, Embedded App Team, **Logitech** (2008-2009)
  - Team of 4
  - Developed and shipped the Harmony 900 Universal Remote Control which CNET awarded 4.5/5 and named "hands down, the best universal remote control we've ever tested."
  - Developed and shipped the Harmony 1100 Universal Remote Control which CNET awarded 4/5.
  - Lead developer for embedded application responsible for on-device business logic for IR/RF device control and Harmony One-Touch Activities.
  - Development for the data-driven (XML) application was mostly Lua with some C for system-level/network-level integration.

- **Graduate Research Assistant**, Vision, Graphics and Robotics Lab, Department of Computer Science,**York University** (2004-2008)
  - Team of 4 to 6
  - Development of automated gait synthesis system for legged underwater robots.
  - Design, construction, software development and deployment of a hand-held underwater scene-modeling sensor.
  - Development of high dynamic range (HDR) image processing software for use in automatic space-shuttle docking.
  - Deployment and testing of a six-legged underwater robot.

education

- **Masters of Science**, Computer Science, York University, 2008

  Thesis

  Automated Gait Synthesis and Path Planning for Legged Underwater Vehicles

  Course topics included:

  Robotics, Human Computer Interaction, Distributed Computing

- **Honours Bachelor of Science**, Computer Science, University of Western Ontario, 2004

  Course topics included:

  Java, C, C++, Networking, Graphics, Game Design, Operating Systems, Image Compression, Databases, Human Computer Interaction

hobbies

- Technology/Gadget/Development blogs
- Cooking
- Travel, SCUBA diving, Skiing
- Video Games, Movies
- Foosball