

ANDREW GERMAN

M.Sc. Computer Science
Software Developer

Toronto, Ontario

andrewgerman.com

416.209.4685

andrewgerman@gmail.com

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: **Swift, Rust, Objective-C, C, Go, Java**
 - Scripting Languages: **Lua, Python, PHP, JavaScript, bash**
 - Markup Languages: **XML, HTML, XHTML, RSS**
 - Network Programming: **TCP/UDP sockets, Protocol Buffers, HTTP**
 - Software Frameworks: **UIKit, SwiftUI, AppKit, Metal, OpenGL**
 - Hardware Interfacing: **HID, Microcontrollers (Arduino, PIC)**
 - Database Packages: **SQLite, MySQL, CoreData**
 - Operating Systems: **iOS, macOS, Linux/BSD**
 - Source Code Version Control: **Git, SVN**
 - Integrated Development Environments: **Xcode, VSCode**
 - Unit Testing Frameworks: **XCTest/OCUnit/SenTestingKit (iOS), junit (Java)**
 - Software Development Methodologies: **Test Driven Development (TDD), Agile, Scrum**

work experience

- **Team Lead, Staff Developer**, Core Features Team, **1Password** (2020-present)
 - Team of 6
 - Developed cross-platform APIs in Rust to support UI features for iOS, macOS, Android, Windows, and Linux apps
 - Dramatically increased consistency and code sharing among 1Password apps on all platforms
 - Lead cross-functional feature teams to ship user-facing feature across multiple platforms simultaneously
- **Senior Developer**, 1Password for Mac & iOS Team, **1Password** (2016-2020)
 - Team of 8
 - Developed features, updates, improvements, and bug fixes for 1Password for Mac and 1Password for iOS
 - Worked on all aspects of the apps from database and backend communication to security to UI enhancements.
- **Team Lead, Principal Developer**, 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
- **Senior Developer**, Autodesk Consumer Group, **Autodesk** (2011-2015)
 - Team of 1 to 8
 - Built iPhone, iPad, Mac applications. Work focused on UI, data layer, image processing, and integration with backend services. Apps included Pixlr-o-matic and Pixlr Express (iOS), Autodesk Pixlr (Mac), SketchBook Pro (iOS)
 - Prototyping for several unreleased projects
 - 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.

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- **Mobile App Developer and Embedded App Developer**, Mobile App Team, **Logitech** (2009-2010) continued
 - 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.
 - 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 Developer**, Embedded App Team, **Logitech** (2008-2009)
 - Team of 4
 - 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 for 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." 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)
 - 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 with

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

- Playing with my kids
- Cooking
- SCUBA diving, Skiing
- Video Games, Movies