

Rolf Hendriks

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Senior Mobile Developer

Highly accomplished engineering professional with extensive experience designing, developing, and deploying high-profile mobile apps, games, and e-Learning solutions

AREAS OF EXPERTISE

- Demonstrated excellence in iOS and Android mobile development, game development, and education technology
- Expert knowledge of Human Interface Guidelines, accessibility, client/server architecture, and localization
- Excellent innovator, able to craft novel problem solutions and initiate original product or process improvements

TECHNICAL PROFICIENCIES

Software: XCode, Interface Builder, git, Android Studio, Visual Studio .NET, Illustrator, Photoshop

Languages: Swift, Objective C, C++, C, C#, Dart, Java, HTML, CSS, SQL, JavaScript, PHP

Technologies: UIKit, Autolayout, Core Graphics, Core Animation, Core Text, Core Image, Core Data, Flutter, sqlite, OpenAL, OpenGL, MediaPlayer (iOS), Android SDK, .NET Framework

Education and Training

FULL SAIL REAL WORLD EDUCATION, Winter Park, FL

Associate of Science in Game Design and Development

Built a 3D game engine from scratch as part of a three-student team

CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA

Bachelor of Science in Discrete Math and Logic with a minor in Computer Science

Professional Experience

The Teaching Company, Chantilly, VA

2019-2020

iOS Developer

Developed all features for Apple TV version of The Great Courses Plus

Key Achievements:

- Delivered Apple TV app with no known bugs or issues
- Refactored iOS code base to ensure common backend logic between Apple TV and iOS apps
- Coordinated with Design and explored Apple TV focus engine internals to ensure a highly polished user experience

Creative Radicals, Vienna, VA

2017-2019

Software Engineer

Full lifecycle development of iOS and Apple Watch app for location tracking and emergency response

Key Achievements:

- Developed iOS and Apple Watch app used by hospice nurses nationwide to track activity and manage emergency incidents
- Researched various emergency response management solutions, implemented integration with 3rd party Bluetooth peripheral
- Created unit tests to simulate and prevent race conditions
- Innovated a canary mechanism to ensure notification in case of unexpected application shutdowns or crashes
- Developed cross platform iOS/Android application prototype using Flutter

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TMSoft, Arlington, VA

2016-2017

Senior iOS Developer

Implemented numerous design and feature improvements for the highly-rated White Noise sleep aid apps on iPhone, iPad, Mac, and Apple TV

Key Achievements:

- Redesigned White Noise for Apple TV and White Noise Baby for iOS
- Built functionality to edit, share, export, and import custom sounds and mixes on iPhone, iPad, and MacOS
- Developed detailed voiceover accessibility support for visually impaired users
- Implemented Spanish and French localizations while building tools for cross platform localization consistency

Blackboard, San Francisco, CA

2013-2016

iOS Engineer

Developed and maintained mobile e-learning applications used by millions of teachers and students worldwide including Bb Student, Bb Instructor, Mobile Learn, and Bb Grader apps

Key Achievements:

- Initiated company-wide reusable framework for custom UI controls and animations
- Created robust reusable file management capabilities to download and view at least 23 different document and media types while handling caching, offline mode, and interrupted downloads
- Introduced company-wide practice of detailed voiceover and dynamic text support
- Developed internal testing apps to help maintain zero defect status for reusable functionality
- Prototyped an innovative JSON-based client/server architecture that ensures a fast user experience against a slow backend by automatically computing changes, solving offline mode and error handling
- Developed an animation framework for unique liquid user interface effects, combining 3D mesh transformations, cubic Bezier splines, and harmonic oscillation physics
- Learned Android development and collaborated with Android team to port iOS animation utilities to Android
- Identified and documented over 500 bugs and issues across products

Sylvan Learning, Baltimore, MD

2010-2012

iPad Designer and Developer

Sole designer, developer, and architect for iPad based learning app that replaces thousands of paper based lessons in hundreds of Sylvan learning centers nationwide

Key Achievements:

- Proactively sought feedback from users by visiting learning centers and conducting usability tests
- Designed, executed, and documented RESTful JSON-based web service architecture
- Created a simulated data server to enable testing with mock data and eliminate backend dependencies
- Developed smooth handwriting and annotation tools using a Bezier Spline based curve fitting algorithm
- Built a unique system for injecting native iOS controls into HTML based lesson content
- Innovated a gesture based grading mechanism, embedding answers into lessons that only teachers could access
- Invented a scroll bar with built in support for left handed users
- Wrote and maintained an online project knowledge base comprised of 196 pages of technical documentation

PointAbout, Inc, Washington, DC

2009-2010

Mobile Software Engineer

Developed 3D user interface animations and application logic for iPad Kiosk app used in the Disney Store.

Key Achievements:

- Created multithreaded algorithm to import a 500MB product catalog from XML into Core Data.
- Built a library of 25 custom controls and animation curves implementing various 3D animation effects.

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Additional Experience

iOS Developer

Designed, developed, distributed, and maintained independent App Store titles.

Key Achievements:

- Authored MapTastic, a highly-rated game that teaches U.S. Geography in a fun way (iPad).
- Developed Party Game Timer, a random countdown timer used for party games and other purposes (iPhone).

Naughty Dog, Inc, Santa Monica, CA

Gameplay Programmer

Developed special effects, bug fixes, and features for *Uncharted: Drake's Fortune*, an award-winning PlayStation game franchise.

Key Achievements:

- Created a system for water splash effects based on movement of individual joints.
- Developed and fixed scripted character sequences for cut scenes.
- Implemented collision detection algorithm for explosions.

DAM Consultants, Bethesda, MD

Game Developer

Developed casual PC games for iWin, Inc. including Battleship: Fleet Command. Fixed bugs and created new features for various parts of the in-house game engine.

Key Achievements:

- Created a jigsaw puzzle game prototype.
- Developed artificial intelligence for computer controlled opponents in Battleship: Fleet Command.

Micros Systems, Columbia, MD

Software Engineer

Implemented features for various enterprise applications in a large point of sale software suite. Gained deep understanding of Windows development, Visual Studio, .NET Framework, and web services.

Key Achievements:

- Created a big systems test that simulates hundreds of workstations performing millions of daily transactions.
- Enhanced credit card encryption algorithms to satisfy the latest VeriSign security standards

Professional Development

- Lifelong learner with ongoing interests in technology and business.
- Basic understanding of electronics fundamentals including microcontroller programming, analog/digital conversion, SPI / UART / I2C communication protocols, shift registers, signal debouncing, transistors, logic gates, 555 timers, etc.