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.
- Skilled at collaborating with Subject Matter Experts, conducting user research, prototyping, and UI/UX design.
- Highly adept at communicating technical information, design aesthetic points and ideas, and delivering presentations to stakeholders and C-level executives.
- Excellent innovator, able to craft novel problem solutions and initiate original product or process improvements.

TECHNICAL PROFICIENCIES

Platforms:	iOS, MacOS, tvOS, Android, web, PC, PS3, PS2, XBox
Software:	XCode, Interface Builder, git, Android Studio, Visual Studio .NET, Illustrator, Photoshop
Languages:	Objective C, Swift, C++, C, C#, Java, HTML, JSON, CSS, SQL, JavaScript, PHP, X86 Assembly
Technologies:	UIKit, Autolayout, Core Graphics, Core Animation, Core Text, Core Image, Core Data, sqlite, OpenAL, OpenGL, DirectX, MediaPlayer (iOS), Android SDK, Angular JS, .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
Theoretical foundation in Machine Learning algorithms

Professional Experience

TMSoft, Arlington, VA   2016-2017
Senior iOS Developer

Helped millions of people sleep better by developing dozens of 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 for editing, sharing, exporting, and importing custom sound mixes.
- Developed detailed voiceover accessibility support for visually impaired users.
- Authored custom tools to share localizations and detect localization inconsistencies between iOS Android.
- Improved performance of custom noise generators by 1200% to enable live sound previews.
- Converted user interfaces to use Auto layout and dynamic text sizes.
- Implemented functionality for generating and sharing binaural beats and custom tones.
- Generated cross platform (iOS + Mac) sound visualization graphs.
- Created sound searching functionality for iOS and Mac.

Blackboard, San Francisco, CA   2013-2016
iOS Engineer

Developed and maintained mobile e-learning applications used by millions of teachers and students worldwide. Authored Bb Student, Bb Instructor, Mobile Learn, and Bb Grader apps. Initiated new practices for writing reusable code, developing internal testing apps, and accessibility support. Gained expert product knowledge, performed troubleshooting, and authored extensive test data.

Key Achievements:

- Initiated company-wide reusable framework for custom UI controls and animations.
- Developed internal testing apps to help maintain zero defect status for reusable functionality.
- Introduced company-wide practice of detailed voiceover and dynamic text support.
- Innovated a data abstraction layer with mock data and simulated network conditions.
- Created robust file management capabilities to download and view at least 23 different document and media types. Addresses caching, offline mode, and interrupted downloads.
- Prototyped an innovative JSON-based client/server architecture that ensures a fast user experience against a slow backend by automatically computing changes. Solves offline mode and error handling.
- Developed an animation framework for unique liquid user interface effects. Combines 3D mesh transformations, cubic Bezier splines, and harmonic oscillation physics.
- Learned Android development and collaborated with Android developers 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. Conducted onsite user research, usability tests. Prototyped and designed UI/UX. Seamlessly integrated native capabilities into HTML based lesson content to produce a top-notch user experience.

Key Achievements:

- 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 a fast, multithreaded algorithm to import and update over 500MB of product data from an XML data feed into a Core Data repository.
- Designed and executed an animation framework enabling developers to easily create features using UIKit and Cocos2d.
- Built 25 custom user controls, transitions, special effects, animations, and animation curves.

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).
- Built an extensive library of reusable custom controls, animations, and developer utilities.

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.
- Programmed a complex collision detection routine for explosions.

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 active reading interests in technology, industrial design, business, and cognitive psychology
- Proficient in embedded development including AVR programming and ATMega/ATTiny microprocessors.
- Strong theoretical understanding of Bluetooth LE, currently pursuing Bluetooth based projects.
- Basic understanding of electronics fundamentals including analog/digital conversion, SPI / UART / I2C communication protocols, shift registers, signal debouncing, transistors, logic gates, 555 timers, etc.