

Nicolas Dedual

NYC, NY

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Software Engineer with over 19 years of work experience, 12 of those focused on iOS, tvOS and macOS development, and now Unity and Unreal Engine. Through my company (Dedual Enterprises Inc), I've been a dev-for-hire (both as a contractor and FT) for companies of all industries and sizes: from start-ups (**Rad Hires, Sneakers Agency, PodOp**) to mid-size companies (**Atlas Obscura, Hivemapper, OTG Management, Big Human, SYPartners**) to multinational corporations (**Dolby Laboratories, NYPost, PepsiCo, Intel Corporation**).

Looking for my next great challenge.

WORK EXPERIENCE

Dedual Enterprises Inc - New York, NY

Lead Developer / Owner

December 2008 - Present

Various roles and technologies

- Specialized in mobile app development, remote and on-site debugging of troublesome application, creation of rapid prototype solutions, greenfield apps brought from designs to the App Store, brownfield app that support current infrastructure, and debugging and optimization services for our clients (with an emphasis on iOS/tvOS device development, computer vision-powered applications and augmented reality development). Some apps and clients we've worked with:
 - Nivos** (iOS/Unity/Game Design – In-house Project, **2023 – Present**): 3D/AR laser puzzle game.
 - Claire** (iOS/Web dev – In-house Project, **August 2023 – Present**): Food recipe API service with a recommendation engine and iOS client.
 - Rove/ ParlaAI /Zenrise Studios** (iOS/Mentoring Services – **February 2023 – Present**)
 - Podop** (Senior iOS Developer / Engineering Manager – July 2021 – July 2023)
 - Atlas Obscura** (Senior iOS Developer / SwiftUI – October 2021 – December 2021)
 - Socure** (Lead iOS/SDK Developer - January 2020 – June 2021)
 - LoveBomb** (Lead iOS Developer - December 2019– February 2020)
 - Dolby Laboratories** (Tech Evangelist/ Speaker - April 2016 – September 2017)
 - Podop** (Senior iOS Developer / Swift/iOS/tvOS/macOS – February 2016 – October 2019)
 - Released **Mosaic** branching narrative film and app (November 2017)
 - Nico** (iOS Developer / Swift - Contractor – October 2015 – January 2016)
 - Hivemapper** (iOS Developer / Swift – October 2015 – January 2016)
 - FieldTheBern** (Volunteer iOS Developer / Swift – October 2015 – February 2016)
 - PepsiPass** (iOS Developer / Swift – November 2014 – July 2015)
 - MySport – The Social Network for Sports** (iOS Developer / Objective-C – May 2014 – November 2014)
 - NoseMouth** (iOS Developer / Objective-C – 2014)
 - Spotlight Text** (iOS Developer / Objective-C – 2014)
 - HBO** (Consultant/Technical Instructor – November 2013 – April 2014)
 - Victoria's Secret PINK apps** (iOS Developer / Objective-C – 2012)
 - Gerber Pregnancy** (iOS Developer / Objective-C – 2012)

SKILLS

- Languages:** Swift, C#, C++, Objective-C, C, Python, Rust, Node.js, GLSL, MSL, GraphQL, Java, XNA, PHP, Lisp, MySQL, Kotlin
- CI/DevOps/IDEs:** TravisCI, Jenkins, TestFlight, Firebase, Github, Git, Gitlab, XCode, Nova
- iOS Frameworks:** AVFoundation, CoreML, ARKit, CoreAnimation, RealityKit, FairPlay integration, RoomPlan, AVKit, SceneKit, CoreTelephony, CoreData, Vision, CoreLocation, Accelerate, Foundation, AFNetworking, GCD, UIKit, SwiftUI, etc.
- Architecture patterns:** MVC, MVP, MVVM, MV (for SwiftUI)

EDUCATION

Columbia University

Master of Science - 2010

Major in Computer Science, focus on Human-Computer Interaction and Augmented Reality
New York, NY

Awards: Intel Fellow, National Consortium for Graduate Degrees for Minorities in Engineering and Science Fellow

University of Florida

Master of Science - 2008

Major in Electrical and Computer Engineering, focus on Signal Processing (image and biomedical) and Human-Computer Interaction
Gainesville, FL

Northeastern University

Bachelor of Science - 2006

Major in Computer Engineering, focus on Software Engineering and Biomedical Image Processing
Boston, MA

HIGHLIGHTS

Rove/ParlaAI/Zenrise Studios – Remote

Senior iOS Developer / Mentor

iOS/Mentoring Services

- Providing expert iOS development support and mentoring services to suite of companies under common ownership.
- Zenrise Studios is a nascent startup focused on the construction business. Developed several prototypes that we are integrating into Zenrise's first app. These include:
 - Methods for accurately measuring rooftops using map data,
 - A landscape scanner using ARKit,
 - An indoor room scanner using RoomPlan, and other prototypes.
- Rove is a media storage app powered by an AI-based, graph engine.
 - Created a background media uploader using BackgroundTasks and other Apple frameworks.
 - Feature introduction led to a 3x increase in user retention rates and a 10% increase in signups.

PodOp - New York, NY

Senior iOS Developer / Engineering Manager

iOS/tvOS/macOS/Engineering Management

- Published *Mosaic*, a branching narrative movie starring Sharon Stone and directed by Steven Soderbergh.
 - Built iOS and tvOS applications, specifically working on navigation and video player UI/UX for both platforms.
 - *Mosaic* was selected as a finalist for Outstanding Innovation in Interactive Media by the Television Academy.
- Developed an internal screenwriting and branching narrative visualization desktop app (**Plot**) that was used throughout *Mosaic* and other projects.
- Improved on existing post-production branching narrative publishing and compositing tool (**Sequence**).
- Prototyped a live 3D-based transition system that composed a 3D environment over a video to display interactive elements to end-customers.
- Oversaw all engineering efforts as we prepared for the release of another branching narrative film: *Full Circle*, starring Claire Danes, Timothy Olyphant, Zazie Beets and others.
- Communicated with the film production team, as well as our design team, to gather requirements and implement prototypes of navigation models, on-device VFX that could be used, 360 video rendering and other considerations and explorations pursued by the film production team.

Socure - New York, NY

Senior iOS Developer / Engineering Manager

iOS – Swift/Objective-C/C++

- Crafted two SDKs: *Document Verification* and *Device Risk*, which are actively used by Socure's clients like: Betterment, SoFi, Chime and others. Instituted Jenkins CI-based testing and deployment pipeline.
- *Document Verification* provides verification of ID documents using a device's camera, and *Device Risk* provides session usage authentication and validation by tracking certain device metrics.
 - Brought down install memory footprint from 200+MB to 3.6 MB, all the while eliminating 3rd party dependencies and recreating all existing functionalities using Apple Vision and other 1st party libraries.
 - Implemented two UI/UX redesigns during my tenure, using some augmented reality designs to better guide the document scanning experience.
 - Supervised team in India for additional development work.
- For *Device Risk*, created initial SDK based on list of requirements and was designed to run unobtrusively and would dynamically adapt its algorithms if other Socure SDKs were in use by a developer.

Lovebomb – Remote

Lead iOS Developer

iOS – Swift

- Realized a 0-to-1 version of app from initial designs provided by client, using Firebase for back-end and user management services and a custom-built audiovisual engine used for composing and recording custom-defined audiovisual messages.
- Implemented metrics system that captured all metadata generated by a user whenever a message was sent or received.

PepsiPass - New York, NY

iOS Developer

iOS – Swift / Objective-C/ Android – Java / C++

- Designed app view, network, and business-logic architecture, implemented all UI/UX designs provided to us by the client, created several critical UI components such as:
 - Realistic pendulum dynamics for several UI elements via UICollectionViews
 - Soda bubbles that float up the screen (done through SpriteKit),
 - Custom transitions that allow for seamless transition between different view controllers while maintaining the illusion of a static screen, among others.

Developed an OCR engine on both iOS and Android platforms using Objective-C, Java (with JNI C/C++ components) and C++ code.