Andre Villanueva

AI-Assisted Software Engineer — iOS & LLM Apps

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SUMMARY

Developer who ships real products with AI in the loop — LLM features inside apps (OpenAI function calling, Anthropic Claude, Gemini) and an AI-assisted engineering process (Claude Code, PRD-driven agent loops gated by builds and tests). Using GPT tools on production code since December 2022, backed by 10+ years of Swift/iOS and Python automation.

SKILLS

AI & automation: Claude Code, Cursor, OpenAI/Anthropic/Gemini APIs, function calling, agent loops, Selenium, scraping
Languages: Swift, Python, JavaScript, Objective-C, C++, bash
Apple platforms: SwiftUI, UIKit, Swift Concurrency, watchOS, visionOS, RealityKit/ARKit, WidgetKit, Live Activities, StoreKit 2, CloudKit, MapKit, Swift Charts
Data & backend: Firebase (Firestore, RTDB, Auth, Cloud Functions), SwiftData, Core Data, Node.js, REST/JSON, GitHub Actions
Architecture & quality: MVVM/@Observable, offline-first sync, XCTest, Swift Testing, TDD, Instruments

EXPERIENCE

Founder & Lead iOS Developer — Bang Bang Studios (independent app studio), Los Angeles 2010 – Present

- Shipped 2 apps to the App Store (Belize Lottery, rated 4.0, live since 2019; Would You Rather: TruthFinder) and lead 5 apps in active development spanning iPhone, iPad, Apple Watch, Vision Pro, widgets and Live Activities.
- Run an AI-assisted delivery process: written PRDs broken into small user stories, implemented with Claude Code in an automated loop gated by builds and tests — 550+ stories on one app alone.

Contract Developer — Sony (via professional screenwriter), Remote Oct – Dec 2025

- Built a Git-versioned screenplay development system for a feature-film adaptation — project bible, source-material database, Fountain act/scene templates and 10+ continuity/QC checklists — used daily by the screenwriter and collaborators.
- Designed a JSON/Markdown "context engine" (rolling context, scene dependencies, setup/payoff and character-state trackers) that kept AI writing assistants consistent across a 110+ page script.

PROJECTS

Stamp — *SwiftUI · Firebase (Firestore, Auth, FCM, Crashlytics) · Node Cloud Functions · watchOS · ActivityKit · OpenAI* Production / TestFlight

- Built a ~298K-line SwiftUI + Firebase workforce platform (iPhone, Apple Watch, Live Activities, 51 widgets/complications) in daily production use by a 16-person service business.
- Shipped a manager AI business assistant using OpenAI function calling over deterministic Swift calculators (the model never does the math), with per-feature usage metering.

Car Codex — *SwiftUI · JSON + CloudKit (CKShare) · Anthropic Claude API · watchOS · Vision · PDFKit* In development

- Built an in-app AI mechanic on the Anthropic Messages API with a fast/extended-thinking model toggle, photo and document context, and structured AI writes back into vehicle records.

MyFitZ — *SwiftUI · SwiftData + CloudKit · WeatherKit · Vision · RealityKit · Claude + Gemini APIs · fastlane* TestFlight

- Built a ~92K-line SwiftUI + SwiftData wardrobe app across iPhone, Apple Watch and Vision Pro (RealityKit immersive closet) with CloudKit sync and WeatherKit outfit suggestions.

AI Provider Kit — *SwiftUI · SwiftData · visionOS · watchOS · OpenAI, Anthropic, Gemini, Mistral, Groq, Cohere + 5 more* Prototype

- Built a SwiftUI reference app for iOS, visionOS and watchOS that puts 11 AI provider APIs behind one provider protocol — streaming chat, image/video generation, vision and voice.

Early LLM Tools (2023) — *Python · OpenAI GPT-4 · tiktoken · Gmail API · YouTube Data API · Flask* 2023 – 2024

- Built a scheduled Python pipeline that runs 18 GPT-4 prompts, renders the results to HTML/PDF and emails a daily report through the Gmail API (Mar 2023).

Agent Loop Harness — *bash · Claude Code · JSON PRDs · build/test quality gates* In daily use

- Built and maintain a reusable autonomous coding-agent harness in bash — one user story per iteration in a fresh context, per-iteration turn and USD budget caps, PRD/progress tracking and build/test gates — used across 6+ iOS and web projects.

EARLIER WORK

Native iOS since 2012 (Belize Lottery, App Store, rated 4.0; Would You Rather: TruthFinder); Python automation since 2019; C++ games (2010–11).

EDUCATION

Self-taught software developer (2010–present: textbooks, WWDC sessions, online university lectures) · Coursework at Los Angeles Trade-Technical College (2009) and El Camino College (2008)