

Overview

This case study highlights the successful development of a mobile and web application designed to provide an engaging platform for discovering, learning, and interacting with gospel music clips. The application caters to both amateur and professional musicians, offering a personalized user experience, extensive content management capabilities, and advanced video playback features.

Problem Statement

- **Limited Accessibility to Gospel Music Clips:** Existing platforms lacked a dedicated space for discovering, learning, and interacting with gospel music, making it difficult for both amateur and professional musicians to engage effectively.
- **Lack of Personalized User Experience:** Users had no tailored onboarding process or content recommendations, leading to a generic and less engaging experience.

Solution

- **Developed a Native iOS Application & MERN-Based Web Admin Panel:** Ensured a seamless and responsive experience for both mobile users and administrators managing content
- **Implemented Personalized User Onboarding:** Designed a tailored onboarding process that curates recommendations based on user preferences, enhancing engagement.

Core Features

★ Piano Music Learner/User Features

- **Musician Audio Clips & Videos:** Users can explore an extensive library of gospel music clips, including audio recordings and high-quality video performances from professional and amateur musicians.
- **Albums & Artist Information:** Gain insights into various gospel artists and their discographies, including album releases, track details, and artist biographies.

★ Admin Features:

- **Musician Management:** Admins can oversee artist profiles, manage musician onboarding, and approve or update content contributions.
- **Album & Clips Management:** A centralized dashboard for organizing, categorizing, and moderating albums and individual clips uploaded to the platform.

Challenges

- ✓ **Cross-Platform Synchronization & Performance Optimization:** Ensuring seamless synchronization between the native iOS application and the MERN-based web platform while maintaining high performance across devices.
- ✓ **High-Quality Video Playback & Controls:** Providing smooth video playback with features like looping, markers, speed control, and seamless play/pause across various network conditions.

Solution

- 💡 **Implemented Firebase for real-time data updates,** reducing latency in content syncing. Optimized API calls and caching mechanisms to enhance speed and responsiveness for both web and mobile users.
- 💡 **Integrated AVKit Framework for efficient media playback on iOS and optimized video compression techniques via Cloudflare's CDN** to reduce buffering times and ensure a high-quality viewing experience.

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Screenshots

