Puzzl Media

CASE STUDY

Mobile Motion-Tracking App for Use in Physiotherapy

by Marc Hamilton | 15 June 2025

Mobile HealthTech

Overview

A physiotherapist approached our team with an existing mobile app designed to assess joint mobility using a phone's built-in gyroscope and accelerometer. The app enables the measurement of rotation angles in the neck, shoulders, arms, and legs-providing useful metrics for physiotherapy professionals working with clients.

Increasingly, businesses across many industries are turning to mobile apps to better serve their customers. A well-designed app allows clients and professionals to interact with a service at any time, from anywhere, creating convenience, accessibility, and trust. For a physiotherapy practice, this kind of tool adds measurable value during assessments and sessions.

The code we received was functional, but it had been built by a developer with limited experience and it was overly complicated and disorganized. This made it difficult to add new features or fix issues which put the long-term viability of the app at risk.

Our Approach

We started by carefully reviewing the existing code to understand what it was trying to achieve. From there, the app was methodically cleaned up to remove unnecessary or duplicated logic. The important parts were restructured in a simpler, more logical way.

This made the app easier to understand and maintain, allowing for faster updates and fewer bugs in the future. Overall, the amount of code was reduced significantly with no loss to existing functionality, which also improved performance and reliability.

Offline Functionality and Firestore Integration

A key improvement was making the app work reliably without an internet connection. The original system relied on a third-party tool for temporary storage, but it often failed or caused issues.

That system was replaced with a more dependable solution that makes use of tried and tested code written by Google. Now, users can record session data while offline, and the app will automatically sync that data to the cloud once internet connection is restored. This ensures that no important information is lost, even in areas with poor network coverage.

Cross-Platform Deployment

Since the app supports both Android and iOS devices, we ensured that it was properly set up for both platforms. This included:

- Securely generating, handling, and renewing certificates for the Apple App Store and Google Play Store
- Keeping up with the latest requirements and security rules from both platforms
- Testing on multiple types of devices to ensure the app looks and works consistently

By supporting both major mobile platforms, the app is accessible to a wider audience while maintaining high standards of security and stability.

User Experience Improvements

To make the app more enjoyable and easier to use, a number of other improvements were made:

- Smoother scrolling and transitions
- Layout adjustments that work across many different screen sizes and devices
- Overall improvements to speed and responsiveness

These updates helped make the app more polished and professional, which is crucial for client-facing tools used in real-world physiotherapy sessions.

Results

- Simplified and cleaned-up code, making the app easier to maintain and improve
- Reliable offline usage, ensuring consistent performance in all environments
- Better stability on both Android and iOS, reaching more users with fewer issues
- Smoother user experience, helping physiotherapists use the app more effectively

ABOUT THE CLIENT

The Lyno Method

Holistic Movement & Therapy | lynomethod.com

The Lyno Method empowers practitioners and clients to restore natural movement and balance. Their innovative approach blends technology and holistic therapy for real-world results.

ABOUT PUZZL MEDIA

Puzzl Media is a developer-led software studio in Cape Town, founded in 2021, working with clients in South Africa and abroad.

Who we work with: founder-led businesses building their first product, and established companies whose engineering or product teams need extra, specialist hands.

How we work: embedded alongside your engineers, or owning a build end to end, from discovery to support after launch.

Get in touch

hello@puzzl.co.za | puzzl.co.za
Puzzl Media Pty Ltd, 24A Hastings Rd, Muizenberg, Cape Town 7945, South Africa