

iHealth Technology Ltd

The World's First Verified Health & Fitness Apps

CASE STUDY

SciChart.iOS

Health & Fitness app for 'High Intensity Interval Training', 'Targeted Heart Rate Cardio Training' and Professional Remote Coaching on iPhone, iPad and iWatch.

Customer

iHealth Technologies Ltd (UK)

Industry

Health & Fitness



The Challenge

Displaying accurate real-time charts for large amounts of data-points (70k points of heart rate data) recorded during training session. These show the 'effort' index and true heart rate trends in a custom line chart and bar chart.

Data & Preconditions

- Data is provided by Polar and My Zone Heart rate sensors
- Outputs up to 70k points per a 1-hour training session
- Open source charts were unable to display this amount of data
- Open source charts were unable to maintain smooth UI
- Open source charts lacked the flexibility & customization



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About iHealth Technologies Ltd

Motivation of the project

Health & fitness apps are common on the iPhone and iPad platforms. As an expert in the health & fitness industry, Scott Alexander of iHealth Technologies Ltd realised that in order for health and fitness apps to be taken seriously, and considered “real training tools” that offer measurable improvement and benefit, a radical approach to innovation was needed in the development of the software to achieve:

- Biometric driven software giving each user adaptive and individualised targets, training intensities, progressive training stimuli and recovery guidance.
- Clinically verified data so that algorithms, user health trends and training patterns are meaningful, safe and effective.
- Real time professional coaching software that delivers accurate health & fitness performance monitoring.

Novel techniques

The iHealth App uses a number of novel techniques to enable remote personal training of a subject. Training sessions are perfectly optimized based on full view of subject:

- heartrate rate and effort index
- % VO2 Max and
- physiological stress levels

all to maximize training gains and optimum recovery time.

The result of iHealth Technology's research

- A technological and scientifically advanced suite of health/fitness apps supported with EU innovation grants to carry out clinical tests, research and the verification of data.
- A software platform built on AI coding logic that offers benefits to beginners, those who are training yet confused, professional athletes and fitness professionals.
- World class innovation, design, and UI helps train and motivate everyone with their fitness ambitions.



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Solution

Custom iOS Chart Integration

SciChart iOS Charts were integrated by iHealth to the existing App, following style guidelines including transparent backgrounds and minimalistic styling.

Custom bar chart series

were developed by SciChart to monitor subject rest and effort periods (as a function of maximal heart rate) in real-time.

Line charts

were added from our standard toolset to visualize heart-rate data recorded during the training session, capable of displaying hundreds of thousands of data-points without slowing down the UI.

Smooth, rich touch interaction

was enabled, to allow Pinch to Zoom, Drag/Touch to Pan, Axis Drag and tooltips on all SciChart.iOS charts.

- Displays 100,000 points iOS Line Charts
- Rich touch interaction (Zooming, Panning, Tooltips)
- Fast and Smooth charts without UI slowdown
- Allows deeper 'view' into the heart rate data

About SciChart

SciChart is a cross-platform WPF, iOS, Android and Xamarin Scientific & Financial Charting Library.

SciChart supports rendering of complex, interactive, real-time charts with many millions of data points for demanding scientific, medical and financial applications and embedded systems that require high performance, rich interaction and smooth updates.

SciChart Ltd

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