

Case study – Live Boxing

Testimonial:

“Great team of guys. They have helped me build our product from start to finish. I would be happy to discuss our work with Biz4solutions. They have been extremely helpful and they have some really smart guys over there! Onshore team here in the states helps me during my day if I have a problem/concern and offshore team overseas work during the night. I will tell you these guys work best under a defined path, if you have a clearly defined path you want them to work towards, they will map it out put it on a time chart and show updates each week. This was important to me because I wasn't very organized before, but I have worked with them for a few years now and when we established that clear line of sight, things move extremely fast!”

- Wes, CEO Live Boxing App



Biz4Solutions engaged a team including Business Analyst, Architect, Designer, Developers, and Quality Assurance. Utilizing virtual workshops to identify and prioritize the requirements, the vision for the app was developed.



Overview

The Live Boxing app is helping boxers around the world to achieve their goals through smarter training using their patented sensors and their suite of applications.

Benefits

Training App:-

For Athletes (Boxers, Kickboxers, MMA athletes):

- View real time training info
- View daily/weekly/monthly progress
- Instant Punch results on your Smart phone or Tablet
- Post workouts and progress to Facebook and/or Twitter
- Compare and Compete with other users on social media
- Review current results to compare with previous results

Issue/Problem

Boxers had no means to determine if their punches are improving i.e. improvement in speed, force, technique, accuracy or not. They could not compare, measure & statistically evaluate their current technique with their previous training data and accordingly schedule their training to improve their efficiency and skill.

There was no application prior to Live Boxing app that we developed to see the detailed stats like punch-type, speed & force from live fights in REAL-TIME.

Challenge

- Implementing Punch detection & velocity estimation algorithms accurately & efficiently without affecting the applications overall speed & performance.
- Sensor data reading through Bluetooth connectivity.
- Broadcast live data through web-socket.
- Training app screen designs in iOS & Android native.
- Display bars in real-time on live screen in arena system.

Solution

Biz4Solutions has developed a suit of different applications, native & cross platform Android & iOS that interface with hardware sensors placed in boxer gloves. Application captures Accelerometer & Gyroscope data from Bluetooth sensors in the boxer gloves, calculates boxing statistics like punch velocity, force & type of punch using the data & displays this data in real time on mobile devices & on desktop based admin console. Data captured is stored locally & is periodically transferred to AWS server using web services. This application entails rendition of information in complex graphics and customized charts. Application uses technology like web sockets for real time communication using server push.

Technologies:

Core Java & Java Servlet
Grails
Ext JS 4
Sencha Touch framework 2.3
Android SDK - Android Native
Objective C - iOS Native
Apache Cordova/PhoneGap
Web-sockets
Bluetooth data transfer
Facebook SDK
Twitter SDK

Arena System:-

Real-time stats from sensors within 1/4th of a second
Knockout punch data / Significant punch data
Round by round comparison
Average/Max Speed & Force throughout
Speed / Force / Technique stats
End of Round Summary
End of Match Summary

Future Enhancements:

Training App:

Calories Burned
Determine fatigue / endurance levels

Entire new App for Coaches & personal trainers:

View detailed training results
View daily/weekly/monthly progress
View Punch Specific data
Track your athletes' workout intensity
Determine athletes' fatigue
Monitor multiple athletes
Adjust training regimen based on performance

Arena System:

Determine fighter fatigue