



A High AI-Q[™]
Company

Comprehensive Performance Tracking and Social Platform for Athletes

Empowering the sports community with a scalable digital ecosystem for real-time score tracking, performance comparison, and global athletic collaboration.

Overview

QBurst developed a cross-platform suite comprising a web portal and mobile application centered on an athlete's performance lifecycle. The solution leverages proprietary algorithms to process raw statistics into comparable scores, integrated with a social networking layer to facilitate engagement between coaches, scouts, and fans.

- **Centralized Intelligence:** Integrated a proprietary Sports Intelligence Database to provide automated, algorithm-driven performance scoring.
- **Enhanced Community Reach:** Social media integration significantly boosted user growth by allowing enthusiasts to follow, like, and share athletic milestones.



Client Profile

Headquartered in the USA, the client serves the global sports fraternity by providing tools that help athletes capture objective evidence of their progress. They maintain a high-scale digital ecosystem associated with a proprietary database that serves as a "Sports Intelligence" hub for evaluation and talent management.

Fragmented Data and Lack of Connectivity

Before the digital overhaul, athletes and coaches lacked a standardized medium to document and verify progress, leading to missed opportunities and unreliable data.

- **Inefficient Score Management:** There was no centralized, easy-to-use mechanism to track scores over an athlete's entire career, making long-term progress analysis difficult.

- **Verification Gaps:** Without a formal approval workflow, athletic statistics lacked the credibility needed for scouts and professional organizations to make evaluations.
- **Siloed Performance Data:** Athletes and coaches had no single solution to manage custom workouts, evaluate talent, and share achievements simultaneously.
- **Schema Rigidity:** Transitioning from a single sport (Baseball) to a broader multi-sport platform was difficult under traditional, rigid database structures.

Solution: Scalable Node.js Score-Tracking Ecosystem

We developed a high-concurrency solution using Node.js and MongoDB to handle large-scale data ingestion and real-time social interactions. The architecture follows a robust MVC pattern to ensure clean separation between data models and presentation layers.

- **Proprietary Scoring Engine:** Developed a backend that ingests data from athletes, trainers, and fans, processing it through custom algorithms to generate standardized scores.
- **Social Engagement Layer:** Integrated full social features including posting (text/video/image), commenting, following, and group creation to build a "sports fraternity" network.
- **Verification Workflow:** Built a request-and-approval system where athletes send stat update requests that must be validated by authorized coaches or peers to ensure data integrity.
- **Dynamic Leaderboards:** Implemented a filterable leaderboard system that allows users to compare performance against competitors across different categories and criteria.
- **Bilingual/Local Support:** Incorporated internationalization and localized date support to cater to the client's global expansion goals.

Key Features

- **Unified Dashboard:** View profiles, lifelong scores, and verified statistics in a single interface.
- **Collaborative Tools:** Send and approve stat updates, create follower groups, and manage team communication.
- **Advanced Discovery:** Search for people, follow/unfollow athletes, and interact with high-definition media posts.
- **Social Authentication:** Simplified onboarding via Facebook registration and login integration.

Development

The solution was built on the Express Framework using the MVC pattern, where data models are shared between mobile API routes and web server routes. We used the EJS (Embedded JavaScript) templating engine to create reusable layouts and partials. The application is highly browser-driven via AJAX, utilizing HTML5 pushState for seamless back-button navigation without duplicating view code.

By choosing MongoDB, we ensured that schema changes required for adding new sports could be performed with ease. Redis was integrated as a session store to handle high-volume user traffic effectively, while a custom migration framework was built to load fixtures and adapt the database to frequent updates.

Technical Highlights

- **Security:** CSRF middleware for XSS prevention and secure server support.
- **Optimization:** Performance-based NoSQL design for low-latency data retrieval.
- **Efficiency:** Reusable presentation logic maintained through custom View Helpers.
- **Logging:** Integrated multi-level logging for real-time monitoring and debugging.

Impact

- **All-in-One Talent Management:** Integrated evaluation, implementation of custom workouts, and progress tracking into a single user journey.
- **Verified Credibility:** The approval system provided the trust layer necessary for professional scouts to rely on the app's data.
- **Scalable Architecture:** The Node.js and MongoDB stack successfully supported the transition from a baseball-focused app to a comprehensive multi-sport platform.