

CACHE

Challenge Title: Uncovering Hidden Value: Data-Driven Athlete Valuation and Marketability

Overview

Peter Brand is a character played by Jonah Hill in the movie, *Moneyball* who leverages the empirical knowledge of an athlete's successes to redefine athlete evaluation by leveraging unconventional metrics. **Cache AI invites students to think beyond traditional measures of performance.** Just as Brand highlighted overlooked data to reveal hidden potential, Cache AI seeks to expand its valuation framework by integrating incremental metrics such as mental acuity, sports IQ, and IRL (In Real Life) impact data, alongside existing analytics.

Cache AI already provides a robust platform that incorporates historical and real-time game stats (e.g., via Sportradar), social media listening tools (e.g., Pulsar), and sideline behaviors observed by scouts. Students are tasked with identifying complementary data points and insights that enhance Cache AI's valuation models while maintaining a user-centric focus for its primary stakeholders: athletes, athletic directors/NIL collectives, and brands/marketing agencies.

Participants will propose data streams and applications that build on existing capabilities, ensuring their contributions are practical, defensible, and aligned with Cache AI's intellectual property. By leveraging resources such as USC's student-athletes and athletic ecosystem, students will help Cache AI push the boundaries of athlete valuation while securing its leadership in the market.

Executive Summary

Cache AI challenges USC MS Business Analytics students to enhance its athlete valuation platform, CacheScore™, by introducing incremental data points and insights to complement its existing analytics. Students will propose enhancements to the current valuation system—such as metrics for mental acuity, sideline behavior insights, and IRL activities—and design user-specific dashboards to demonstrate their value. This challenge emphasizes innovation, scalability, and the ability to drive actionable insights without altering Cache AI's core IP. Winning teams will be recognized in Cache AI's newsletter and offered exclusive networking opportunities with Cache AI leadership.

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Product Overview

Cache AI leverages advanced artificial intelligence to establish transparency and fairness in athlete compensation. Our proprietary **adaptive reinforcement learning model** and valuation methodology provide stability in an otherwise unpredictable market. By delivering **unbiased, data-driven insights**, Cache AI empowers athletes, teams, and brands to **understand, measure, and optimize** the most valuable asset in sports—the athletes themselves.

Core Features:

- **CacheScore™** – A comprehensive rubric measuring an athlete’s brand strength, assessing factors like marketability, influence, and engagement.
- **CacheValue™** – A precise, AI-driven assessment of an athlete’s fair market value, ensuring equitable compensation and strategic decision-making.

For additional details on our data framework, please refer to the appendix.

Problem Statement

Cache AI currently utilizes a strong foundation of analytics, including game performance stats, social media metrics, and sideline behavior data, to deliver precise athlete valuations. However, the sports landscape demands increasingly holistic assessments that consider mental acuity, leadership, and community impact. Cache AI seeks to incorporate these factors as incremental improvements to its platform, enabling more comprehensive and defensible valuations for its users.

Case Study Objectives

1. **Propose Incremental Data Points:** Suggest additional data streams and credible sources that complement Cache AI’s existing analytics, including any or all of the following:
 - **Mental Acuity and Sports IQ:** Metrics to measure decision-making, adaptability, and game intelligence.
 - **Sideline Behaviors:** Build on scout-provided insights to include leadership cues, focus, and real-time interactions.
 - **IRL Impact:** Data on academic achievements, community service, internships, and NIL activities.
 - **User-Specific Metrics:**
 - Athletes: Metrics to improve personal CacheScore™ and NIL potential.

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- Athletic Directors/NIL Collectives: Insights to optimize recruitment, program ROI, and team dynamics.
 - Brands/Marketing Agencies: Tools to predict endorsement ROI and evaluate athlete-brand alignment.
2. **Improve Existing Analytics:** Optimize current analytics with the proposed data points, enhancing accuracy, depth, and usability while ensuring the insights are defensible. Provide specific use cases supported by clear explanations of both technical feasibility and strategic impact.
 3. **Incorporate Sideline Behavior Analysis:** Develop ways to systematize and expand insights from sideline behavior, incorporating factors like coachability, composure, and leadership presence.
 4. **Strategic Implementation:** Develop a roadmap for integrating new data into Cache AI's platform, addressing:
 - Data acquisition and validation methods.
 - Customization for user-specific needs.
 - Scalability and practicality of implementation.
 5. **Enhance Dashboard Design:** Propose actionable and intuitive dashboard features for each user group.
 6. **Leverage First-Party Data:** Develop creative strategies to engage athletes directly, capturing data on mental acuity, sideline behaviors, and IRL activities (e.g., gamified surveys, campus collaborations, or peer-reviewed metrics).
 7. **Address Long-Term Impact:** Include an explanation of how the proposed solutions position Cache AI for sustained growth and scalability across multiple sports or geographic markets.
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Key Users and Needs

Athletes (High School, College, Professional)

- Needs: Tools to improve CacheScore™, secure NIL deals, and demonstrate holistic value.
- Sample Metrics:
 - Mental acuity metrics, such as reaction time and decision-making adaptability.
 - IRL activities like academic achievements and community service.
 - Social media engagement and sentiment analysis.

Athletic Directors/NIL Collectives

- Needs: Metrics to identify recruits with the best combination of athletic, mental, and leadership qualities.
- Sample Metrics:
 - Recruitment prioritization (balancing sports IQ, NIL potential, and leadership).
 - ROI metrics for athlete development and funding allocations.
 - Enhanced sideline behavior insights, such as composure and team dynamics.

Brands/Marketing Agencies

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- Needs: Data to evaluate athlete marketability and predict endorsement potential.
 - Sample Metrics:
 - Athlete-brand alignment scores based on shared values and audience demographics.
 - Geo-specific fan engagement metrics for targeted campaigns.
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Solution Deliverables

1. Solution Overview:
 - A concise summary of how proposed data points enhance Cache AI's valuation framework.
 - Highlight the value added by new metrics for each user group.
 2. Data and Analytics Proposal:
 - 3–5 incremental data points for each user group.
 - Suggested data sources and rationale for inclusion.
 3. Implementation Strategy:
 - A roadmap for integrating proposed data points, addressing scalability and validation challenges.
 4. Enhanced Dashboard Features:
 - Wireframes of dashboards tailored to athletes, athletic directors, and brands.
 5. Creative First-Party Data Strategy:
 - Methods to engage athletes directly (e.g., gamified surveys, peer assessments, or interviews).
 6. Optional Visual Component:
 - Include a visual representation of how new data points flow through the Cache AI system or enhance user experiences.
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Outcome for Cache AI

This competition will deliver actionable solutions to enhance CacheScore™, incorporating incremental metrics for mental acuity, sideline behaviors, and IRL impact data. Winning teams will be featured in Cache AI's newsletter and offered exclusive networking opportunities with Cache AI leadership. By leveraging USC's athletic ecosystem and student innovation, Cache AI will further solidify its position as a leader in sports analytics and provide credit to those who supported this initiative.

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Appendix

The current CacheScore consists of Game Impact (40%), Online presence impact (35%), and Other impacts (25%). Other impacts consist of real-life activities, education, and performance. Students are tasked with identifying metrics to improve measurement and accuracy of the Other impacts.

