The Role of Artificial Intelligence in Arbitration and Legal Challenges Arising from Automated Decisions in Sports

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1. Round 1

1.1 Reviewer 1

Reviewer:

The introduction states, "This study underscores the increasing integration of AI in sports, its legal and ethical ramifications, and the urgent need for regulatory frameworks to uphold fairness and accountability in officiating." While the need for regulation is acknowledged, the article does not specify whether existing sports arbitration regulations (e.g., CAS rules) have already addressed AI. Consider incorporating specific references to current legal frameworks governing AI in sports.

The article discusses a "notable example" in a 2019 French Ligue 1 match where VAR incorrectly ruled out a goal. However, it does not cite an official ruling, appeal, or legal proceeding that resulted from this case. Including references to official reports from FIFA, IFAB, or sports arbitration courts would enhance credibility.

The phrase, "AI-based officiating systems, particularly those utilizing deep learning, often operate in a way that makes it difficult to understand how they reach certain decisions," is an important issue. However, no explanation is provided on how existing AI models in sports are being modified for explainability. Adding recent advancements in explainable AI (XAI) would improve the discussion.

The discussion of athlete rights states, "A clear process for challenging AI-generated rulings has yet to be established." This statement should be expanded by citing existing appeal mechanisms within sports arbitration (e.g., CAS and national sports federations). Are AI decisions appealable under current sports law?

The article references a study claiming that "automated foul detection systems may disproportionately penalize Black players." While this is a critical concern, the article does not provide the statistical methodology used in such studies. Adding a reference to specific empirical research would strengthen this point.

Author revised the manuscript and uploaded the updated document.

1.2   Reviewer 2

Reviewer:

The terms "AI-assisted refereeing," "AI-driven officiating," and "automated decision-making" are used interchangeably. It would be beneficial to define these terms clearly in the introduction and maintain consistent usage throughout to avoid ambiguity.

The review states, "Despite these benefits, AI-driven officiating systems present challenges, including legal accountability for errors, algorithmic transparency, and potential biases." However, there is no reference to empirical studies quantifying the frequency of AI-related officiating errors or biases. Adding statistical data or case studies would strengthen this argument.

The section compares AI use in different countries but lacks a comparative legal analysis. How do the regulatory approaches of the U.S., EU, and China differ in assigning liability for AI arbitration errors? A table summarizing these differences would be valuable.

The statement, "Every automated decision should be reviewed or validated by a human referee," lacks discussion on the practicality of this approach. Given the speed of gameplay in sports like football or tennis, can human referees feasibly review every AI decision? Addressing the balance between automation and human intervention would improve this argument.

Author revised the manuscript and uploaded the updated document.

2.   Revised

Editor's decision after revisions: Accepted.
Editor in Chief's decision: Accepted.