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The Application and Safety Challenges of Digital Technology in Sports Education and Training

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ABSTRACT With the rapid development of big data, artificial intelligence, the Internet of Things, virtual reality, and augmented reality, physical education and sports training are shifting from experience-based instruction toward data-driven and intelligent systems. Digital technologies improve scientific training, personalized instruction, immersive learning, and resource allocation efficiency, but they also introduce risks involving data security, privacy protection, technology dependence, digital inequality, physical and psychological health, and algorithmic fairness. This paper constructs an integrated analytical framework covering two dimensions: technology application and safety challenge. It systematically examines digital technology applications in physiological monitoring, intelligent decision-making, immersive simulation, and education management, and analyzes security risks such as biometric data abuse, wearable device interference, algorithmic opacity, virtual-training dependence, and uneven access to technological resources. By combining systematic content analysis with logical deduction, the study clarifies the performance gains and risk transmission mechanisms of digital sports education and training. It provides theoretical support and practical recommendations for building secure, fair, and reliable digital sports training ecosystems, including wireless sensing-based monitoring environments.

INDEX TERMS digital technology, sports education, sports training, data security, wireless sensing

I. INTRODUCTION

PHYSICAL education and training have become popular globally as primary avenues for enhancing national health and developing competitive sports talent, increasingly supported by advanced materials that optimize athletic performance and facilitate physiological monitoring. The global expansion of these programs increasingly integrates high-performance fiber technologies to support participant development and safety across all levels of training. The digital age is characterized by a wave of digital technologies—including vast data, artificial intelligence (AI), the Internet of Things (IoT), virtual reality (VR), and augmented reality (AR)—which are redefining the field of physical education and training more than ever before. The traditional paradigms of training, which relied on experience, observation, and the subjective judgment of coaches, are gradually giving way to scientific, customized approaches that utilize precise data gathering, smart analytics, and visualized feedback. This change is not limited to high-level competitive sports preparation but is also consciously infiltrating wider spheres such as school sports education and community exercise guidance. The continuous collection, storage, and analysis of large volumes of physiological, behavioral, and biometric information raises critical concerns regarding the protection of sensitive personal data and the prevention of data breaches. Secondly, excessive utilization of technology can result in decreased cognitive and decision-making abilities of coaches and athletes, as well as operational risks due to system malfunctions and errors. Moreover, disparities in access to technological resources can further widen the digital divide in the distribution of sports resources and create new inequalities in the enjoyment of technological benefits by individuals from different regions and socioeconomic statuses. Additionally, biases and discrimination may exist in algorithmic models, as well as the possible influence of virtual environments on the physical and mental health of users, all of which need to be addressed with due seriousness.

Although digital technology has a very empowering effect in sports education and training, the numerous challenges it presents in terms of security are systematically revealed and analyzed in this article. This paper offers a broad perspective to researchers and industry stakeholders by building an analytical framework that integrates smart technology implementation with security considerations, contributing to the sustainable evolution of digital sports education. By aligning advanced fiber-based sensing with data security protocols, this research fosters a healthy and inclusive environment for the future of digital training and sports science.

II. RELATED WORK

In recent years, the field of physical education and training has been undergoing a profound paradigm shift. Fridhi and Bali [1] believe that AR technology can effectively guide children with autism spectrum disorder (ASD) in conducting physical training in their daily environments. Kiram et al. [2] evaluated the sepak takraw training program at the West Sumatra Student Physical Education and Training Center. Septiano and Amrulloh [3] conducted an in-depth evaluation of the management structure, processes, resource allocation, and supervision mechanisms of the Student Physical Education and Training Center. Haryanto et al. [4] focused on the establishment, operation, and impact of the Student Physical Education and Training Center in the Gorontalo region of Indonesia on the development of local physical education. In the teaching of massage techniques, physical education majors face the problem of insufficient student understanding and skill development. Selvani et al. [5] used the research and development method based on the ADDIE model to design and verify video learning media for massage courses, and invited material experts, media experts, and physical education students from Padang State University to conduct evaluations. Sports training is an important way to improve the quality of Indonesia's population.

Raharjo et al. [6] used a qualitative assessment method and the Context, Input, Process, Product (CIPP) model to evaluate the regional student sports education and training center. The research subjects included administrators, coaches, athletes, parents, and facilities from multiple sports. Rezaini et al. [7] collected data on student athletes regarding learning effectiveness, participation, and satisfaction to verify the effectiveness of the blended learning model. Kadhim et al. [8] designed a multi-stage benchmarking mechanism by systematically analyzing the application scenarios of AI in sports education and the constituent elements of the existing curriculum infrastructure. Sinaga et al. [9] summarized the achievements of the Taekwondo center in athlete training and identified shortcomings in training facilities, coach levels, scientific training methods, and logistical support. Jastrow et al. [10] reviewed and highlighted that future research needs to pay more attention to the long-term effects of technology integration, support strategies for teacher professional development, and digital equity issues. Based on the above research, this paper aims to construct an integrated analytical framework to systematically examine the risk dimensions hidden behind technological empowerment, in order to provide a theoretical basis and practical guidance for building a safe, reliable, and inclusive digital sports education and training ecosystem.

III. METHODS

A. CONSTRUCTION OF AN INTEGRATED ANALYSIS FRAMEWORK

To comprehensively, rather than in isolation, examine the interaction between digital technology and sports education and training, this study first constructs a two-dimensional integrated analytical framework. The horizontal axis of this framework represents the technology application dimension, whereas the vertical axis represents the security challenge dimension. The aim is to establish a matrix-like analytical grid to ensure that a corresponding and in-depth security risk assessment can be conducted for each technology application scenario.

The establishment of the technology application dimension is based on a literature review and summary of the current frontiers and practices in sports technology, and is mainly divided into four core levels:

(1) Data Collection and Physiological Monitoring Layer: focuses on the continuous and standardized capture of athletes' biosignals and kinematic parameters by IoT sensors, wearable devices, etc.;

(2) Data Analysis and Intelligent Decision-Making Layer: centers on the mining of the value of massive data by AI and machine learning algorithms, which are used for performance evaluation, injury prediction, and training program optimization;

(3) Immersive Experience and Simulation Layer: covers the simulation of training environments and skill learning assistance through VR and AR technologies that provide superimposed information;

(4) Management and Resource Optimization Layer: includes digital management platforms, online education tools, etc., aimed at improving the efficiency of sports education resource allocation, teaching process management, and organizational operations [11,12].

The security challenge dimension focuses in depth on specific risks in physical education and training scenarios. Based on the interdisciplinary integration of competitive sports ethics, sports medicine, and training characteristics, this study identifies five major categories of sports-centered challenges:

(1) Risk of Abuse of the Competitive Value of Biometric Data: Unlike ordinary physiological data, athletes' heart rate variability, muscle oxygenation levels, and technical biomechanical characteristics are directly related to competitive performance, and their leakage may lead to targeted tactical deployment by opponents, illegal gambling manipulation, or unauthorized commercial use.

(2) Sports Injuries and Interference Caused by Wearable Devices: Sensors and their fastening devices may cause skin abrasions, joint restraint, or accidental detachment during high-speed and high-intensity exercise, while vibration or sound prompts from real-time feedback equipment may distract athletes and induce secondary injuries.

(3) The Fairness Paradox of Algorithmic Decision-Making in Talent Selection and Competition: When AI models assess athlete potential based on historical data, they

may reinforce biases toward specific body types or technical styles, potentially resulting in non-competitive exclusion driven by data hegemony. Moreover, when algorithmic evaluations conflict with traditional coaching judgments, the allocation of rights and responsibilities becomes ambiguous.

(4) Proprioceptive Imbalance Caused by Virtual Training: Long-term reliance on VR/AR environments for tactical simulations may weaken athletes' spatial perception, predictive ability, and adaptability to physical confrontation in real competitions, resulting in a disconnect between virtual training experiences and real-world competitive performance.

(5) The Distortion of the Sports Talent Selection System by the Digital Divide: The equipment gap between top training centers with abundant technical resources and grassroots sports schools makes technology-assisted performance a hidden variable in cross-level comparisons, overshadowing the true talents and hard work of athletes.

B. SYSTEMATIC CONTENT ANALYSIS AND LOGICAL DEDUCTION

Guided by the established analytical framework, this study conducted a systematic content analysis and logical deduction. This process went beyond a simple literature review and instead involved in-depth deduction and dialectical analysis based on the proposed framework.

First, a detailed functional and performance analysis is conducted for each specific scenario within the technology application dimension. For example, when analyzing wearable devices, the analysis not only describes how these devices collect data such as heart rate and speed, but also explains how such data are transformed into specific indicators of training load quantification, fatigue assessment, and injury risk prediction through algorithmic models, thereby clarifying the nature of their performance gains in scientific training. This part of the analysis aims to explain why technology is useful in practical training contexts [13,14].

This study introduces a "technical complexity weighted index" when quantifying the level of technology adoption in institutions. The specific operations are as follows: The six types of technologies are divided into basic types (wearable heart rate monitors, digital management platforms), advanced types (video analysis software, AR assistive tools), and complex types (biomechanical analysis systems, VR training systems) based on system integration, unit cost, and professional operation thresholds. Each basic skill is worth 1 point, each advanced skill is worth 2 points, and each complex skill is worth 3 points. The total score of an institution's technology adoption is calculated as the sum of the scores for all adopted technologies. Based on the total score distribution, the adoption level is classified into three categories: high ($\geq$ 8 points), medium (4–7 points), and low (0–3 points). This method avoids the bias caused by simple counting. For example, a combination of a biomechanical analysis system (3 points) and a VR system (3 points) can achieve a high score (6 points), while using four basic technologies (4 points) is in the mid-range, which more accurately reflects the depth of technology application and cost investment.

Next, the logical deduction method is used to demonstrate the transmission mechanism from technology application to security challenges. This is the core of the methodology of this study. For example, starting from the application of wearable devices that collect detailed physiological data, the following logical chain can be deduced: the data contain highly sensitive personal information; the data therefore possess commercial and research value; institutions are consequently driven to collect and centrally store large volumes of data; storage systems may face external attacks or internal management loopholes, potentially leading to data leakage and resulting in consequences such as privacy infringement and discrimination.

Similarly, in the application of AI decision support, the deduction chain can be described as follows: algorithmic decision-making relies on historical data; historical data may contain inherent biases of human decision-makers; and algorithms learn and amplify these biases, potentially leading to systemic injustice against certain groups of athletes. Moreover, due to the black-box nature of many algorithms, such injustice can be difficult to detect or challenge. Through this step-by-step deduction, the potential risks are concretized and institutionalized, so that they are no longer vague concerns, but specific threats with clear paths that can be understood and prevented [15].

IV. RESULTS AND DISCUSSION

A. MULTIDIMENSIONAL APPLICATIONS OF DIGITAL TECHNOLOGY AND THEIR PERFORMANCE GAINS

Digital technology in sports education and training is characterized by multiple levels and perspectives, which greatly improve the scientific nature of training, the efficiency of teaching, and the refinement of management.

IoT-based wearable sensors have become the standard for monitoring athletic performance and analyzing data in high-level training and mass fitness. These devices are capable of continuously gathering enormous amounts of data on athletes, such as heart rate, blood oxygen saturation, speed, acceleration, movement path, and sleep quality, 24/7. This real-time data analysis and monitoring of training loads over long periods allow coaches to accurately measure athletes' training loads, achieve individualized load monitoring, and effectively prevent overtraining and sports injuries. Moreover, with the integration of AI and machine learning algorithms, the system can extract optimal performance patterns based on historical data, detect subtle yet critical malfunctions in technical movements, and even forecast peak performance and future injury risks for athletes. This shift from descriptive to predictive analysis transforms training decisions from experience-driven to data-driven, greatly enhancing the scientific quality of training.

VR and AR technologies have provided novel forms of immersive learning at the skill learning and tactical training levels. VR technology can simulate competitive activities to a great extent, giving athletes the opportunity to rehearse tactics and make decisions without expending physical energy. This is especially applicable to sports with large spatial requirements, such as football and basketball, where quick decision-making is necessary. AR technology can superimpose virtual guidance lines, movement paths, or other important data onto the actual training area, providing trainees with real-time feedback that is intuitively understood. For example, swimmers can use AR glasses to see virtual instructions on their stroke direction, while in track and field, athletes can observe graphical displays of stride frequency and length. This enhanced visual feedback speeds up skill acquisition and minimizes the likelihood of ingraining incorrect movements. Digital technology also plays an important role in the popularization and management of physical education. Through online learning platforms and mobile applications, high-quality physical education materials can now overcome geographical boundaries, serving a larger population of learners. Digital management platforms combine many features, including student information management, course scheduling, venue booking, equipment management, and financial monitoring, enabling administrators to have a holistic view through data dashboards, optimize resource distribution, and enhance operational efficiency. Blended learning models, in which theoretical learning is conducted online and practical learning occurs offline, also make learning more flexible and enjoyable.

To quantify the practical application and perceived value of various digital technologies in sports education and training institutions, this study conducted a stratified sampling survey of 500 sports education and training institutions in Indonesia. The sample covered urban and rural areas of major islands such as Java, Sumatra, and Kalimantan to ensure regional representativeness. Table 1 presents exemplary results based on this survey:

Wearable devices and video analysis software are mature and low-cost technologies that have been widely adopted, and their efficiency is fully recognized, as shown in Table 1. Although biomechanical analysis systems and VR/AR systems are perceived as highly effective, their adoption rates are low due to cost and technical complexity, which implies a possible uneven distribution of technical resources.

B. SECURITY CHALLENGES AND RISKS ARISING FROM TECHNOLOGY APPLICATIONS

As the level of technology and scope of influence continue to rise, a series of complex security issues have also emerged. Unlike digital risks in general office work or the medical field, technical challenges in sports settings are often directly related to athletes' career integrity, competitive fairness, and physical safety, and have distinct domain specificity.

1) Risks of Abuse of the Competitive Value and Commercial Exploitation of Biometric Data

The data obtained during sports training go far beyond exercise data and also include highly confidential personal physiological data (electrocardiogram, blood oxygen saturation, muscle oxygenation), biomechanical characteristics (joint angles, force sequence), and training load data. Once such data are leaked, the consequences are not only an invasion of privacy but also a direct threat to competitive fairness—opponents can develop targeted tactics by analyzing an athlete's fatigue threshold; betting companies can manipulate odds based on non-public status data. In addition, data from young athletes are often obtained free of charge by equipment manufacturers under the guise of so-called scientific research cooperation and subsequently used for commercial algorithm development. However, the athletes themselves and their guardians do not receive a reasonable share of the profits, which constitutes a new form of sports labor exploitation.

2) Sports Injuries and Training Interference Caused by Wearable Devices

The integration of smart technology and sensors is not completely seamless. In large-scale movement events such as gymnastics and swimming, prolonged friction between fabric electrodes and skin can lead to contact dermatitis; rigid sensor modules may cause subcutaneous bruises due to impacts in contact sports (such as football and basketball). A more subtle risk lies in the feedback mechanism: vibration prompts or real-time voice broadcasts can interrupt the fluidity of athletes' movements. During sprint starts or weightlifting, such distractions can directly lead to technical errors or even acute injuries. Currently, the industry lacks safety certification standards for wearable devices in sports contexts.

3) Black-Box Algorithmic Decision-Making and Accountability Vacuums in Talent Selection and Competition Evaluation

The decision-making processes of AI models used to select athletes, evaluate performance, or predict injuries are often difficult to interpret. When algorithmic evaluation results conflict with traditional coaching experience—such as when the system underestimates the potential of an athlete with a non-mainstream technical style due to historical data bias— should the responsibility for the final selection failure lie with the algorithm developer, the deploying agency, or the coach? Existing laws and industry regulations are unclear. Additionally, although auxiliary systems such as Video Assistant Referee (VAR) in real-time matches are intended to improve fairness, their judgment thresholds (such as millimeter-level offside calls) may deviate from the consensus range of human referees, triggering a deep conflict between technical absolutism and the competitive spirit.

4) The Disconnect Between Proprioception Caused by Virtual Training and Actual Competition Ability

Long-term VR tactical training can cause athletes to become dependent on the virtual environment. Physical variables

TABLE 1. Popularity and Perceived Effectiveness of Various Digital Technologies in Sports Education and Training Institutions (Data from a Survey of N = 500 Institutions)

Technology Type	High Adoption Rate (> 60% of Institutions Adopt)	Moderate Adoption Rate (30%–60% of Institutions Adopt)	Low Adoption Rate (< 30% of Institutions Adopt)	Average Perceived Effectiveness (1–5 Points, 5 Being the Highest)
Wearable devices (heart rate monitors, GPS, etc.)	75%	18%	7%	4.5
Video analytics software	68%	22%	10%	4.2
Digital management platform	55%	30%	15%	4.0
Biomechanical analysis system	25%	40%	35%	4.6
VR Training System	15%	25%	60%	4.3
AR Assistive Tools	8%	20%	72%	3.9

such as wind speed, field surface conditions, and the intensity of physical confrontation in real arenas are difficult to simulate completely in VR systems. If athletes rely on visual cues for decision-making training for extended periods, their tactile feedback capabilities and adaptability to physical confrontation may deteriorate. Young athletes are particularly prone to transferring successful experiences from the virtual environment to real-world situations, which may create a greater psychological gap and self-doubt when actual outcomes differ from their expectations.

5) The Digital Divide's Institutional Obstruction to the Vertical Flow of Sports Talents

The digital divide not only manifests as a resource gap but also evolves into an invisible barrier in the talent selection system. In provincial and national youth competitions, athletes from technologically advanced training centers are accustomed to adjusting tactics based on real-time data feedback, whereas athletes from grassroots sports schools rely solely on coaches' observations and their own perceptions. The difference in competitive performance between these groups cannot currently be separated from the difference in technological assistance, making it difficult to determine how much is due to real ability and how much to access to technology. This results in talented athletes from resource-poor areas being excluded from the core training sequence at an early stage, violating the fundamental principle that sports selection should be based on biological potential.

According to Table 2, a hypothetical security breach may compromise millions of sensitive records, with effects including invasion of privacy, institutional notoriety, and legal action, to name a few. Currently, the data security management framework in many sports organizations is disorganized, and security measures such as data encryption, access regulation, and data anonymization are not implemented consistently, which poses a significant security risk.

Secondly, there is the danger of overdependence on technology systems and de-skilling. According to cognitive load theory, when coaches rely too much on automated analysis tools, their active information processing capabilities are weakened, leading to a gradual decline in domain-related intuitive decision-making abilities. Expert decision-making relies on pattern recognition and situational intuition, which are maintained through continued unaided practice. Once coaches and athletes become accustomed to systems in which training plans and movement analyses are provided by algorithms, they may gradually lose their intuitive judgment and the ability to understand the essence of sports, which were developed over years of experience. The entire training system may be paralyzed when a power outage, network failure, software crash, or hardware damage causes the technological system to malfunction. Such technological reliance can also lead to false assumptions about abnormal conditions; if there are defects in the algorithmic model or the data used to train it lack diversity, the resulting recommendations may be misleading.

Third, the problem of algorithmic fairness and transparency is gaining attention. AI models used to select athletes, measure performance, or predict injuries often function as black-box systems, making their decision-making processes and outcomes difficult to interpret. If the datasets used to train these models are biased (for example, containing mainly data from a certain population), the algorithm may reinforce or even exacerbate this bias, resulting in systematic underestimation or discrimination against members of other groups (such as different genders, races, or body types). Justice requires that technology be fair, transparent, and auditable, and these conditions are prerequisites for ensuring fairness and transparency.

Fourth, one cannot ignore the possible influence of virtual environments on physical and mental health. Long-term exposure to VR training can cause discomfort in the form of motion sickness, visual fatigue, and spatial disorientation. These physiological symptoms affect long-term educational outcomes through two intermediary pathways: first, motion sickness and visual fatigue directly lead to shortened training duration and reduced practice intensity, weakening the amount of deliberate practice required for skill acquisition and thus affecting competitive improvement; second, real-world sports performance anxiety caused by spatial dislocation may prompt athletes to avoid team training scenarios. This avoidance behavior is particularly significant among young athletes, ultimately leading to reduced opportunities for social interaction and delayed development of social skills. Over time, the sensory disparities between virtual and real worlds may affect athletes' perception-motor coordina-

TABLE 2. Impact Analysis of a Simulated Sports Training Data Leakage Incident

Leaked Data Types	Estimated Number of Affected Records (in 10,000s)	Potential Risks and Consequences
Personal identification information (name, ID, etc.)	150	Identity theft and fraud
Detailed physiological data (heart rate variability, sleep data, etc.)	120	Health discrimination, insurance denial/higher premiums
Biometrics and motion data	80	Action patterns copied for improper purposes
Geographical location and training trajectory	90	Personal whereabouts exposed, security threats
Medical and health records (injury and illness history)	60	Employment discrimination and psychological stress
Total/Comprehensive Impact	500	Severe organizational reputational damage, huge legal compensation claims, and a collapse of user trust

tion in actual competitions. Excessive use of virtual training at the expense of real physical interaction and teamwork can also negatively impact athletes' social development and psychological resilience.

Lastly, the problem of the digital divide is acute. In Table 3, the capacity of well-funded national training centers and the most competitive university sports departments to access advanced digital technologies and interactive technological resources contrasts sharply with the limited resources available to grassroots sports schools and ordinary primary and secondary schools. This disparity is not limited to the acquisition of hardware equipment but extends to technical support, upgrades, and the appointment of professional staff. Technology is intended to promote equity in sports activities, but unless accessibility concerns are adequately addressed, it could instead increase imbalance, making the strong stronger and the weak weaker.

Through stratified sampling, the research subjects were subdivided into five levels according to institutional functions and resource endowments: national/provincial training centers, university sports departments, commercial sports clubs, grassroots sports schools/sports-focused middle schools, and sports departments of ordinary primary and secondary schools. Data collection on the implementation of six cutting-edge technologies—such as wearable products, biomechanical analysis systems, and VR/AR systems—and their average annual dedicated investment funds was conducted using a standardized questionnaire. After data cleaning, it was determined that advanced technology adoption was defined as the simultaneous adoption of at least three high-level technologies, and the adoption rate at each level was determined. Aggregation was then performed on the median investment budget. According to this process, a comparative chart indicating the distribution of technology adoption and resource investment at each level was drawn as illustrated in Figure 1.

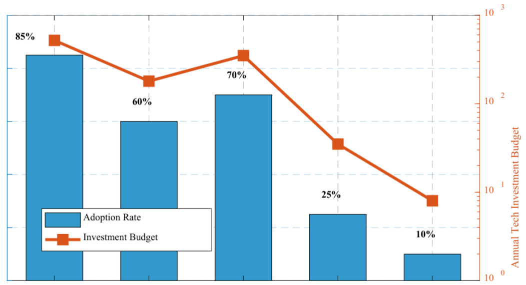

FIGURE 1. Technology Adoption Rate and Investment Budget of Sports Education and Training Institutions at Different Levels

Figure 1 shows the distribution of technological resources within various sports institutions. National-level training centers have the highest adoption numbers at 85, while ordinary primary and secondary schools drop to 10, indicating a sharp decline. This suggests that the administrative level of the institution and its ability to acquire resources are closely related to the level of technology adoption. The technology adoption rate of commercial clubs (70%) is higher than that of universities (60%). This difference is not only due to the stronger market-driven and investment-oriented approach of commercial clubs, but may also be related to their relatively flexible infrastructure with fewer decision-making layers. In contrast, the bureaucratic procurement process at large universities often restricts the speed and scale of new technology adoption. The budget curve on the right is even more significant: the budget of national training centers (5.2 million CNY) is about fifteen times that of grassroots sports schools (350,000 CNY) and the budget of ordinary primary and secondary schools (80,000 CNY). This difference in magnitude is much greater than the difference in adoption rates, suggesting that the fundamental cause of the digital divide is the massive difference in economic investment.

V. CONCLUSION

Digital technology, particularly through the integration of intelligent sensors, has brought a powerful transformative force to sports training and education by enabling the precise digital capture of physiological data. This synergy between data science and advanced fiber engineering is redefining how athletic performance is monitored and optimized within the modern educational landscape. Its applications have extensively impacted multiple areas, including monitoring and analysis, skill learning, tactical simulation, and resource management, significantly improving scientific rigor, efficiency, and the overall experience in training and education. However, this technological empowerment comes at a cost, and this article systematically reveals the associated challenges. It also presents multidimensional security issues, including information security and privacy concerns, technological reliance and systemic risk, algorithmic bias and unfairness, the potential impact of virtual environments on physical and mental health, and the exacerbation of the digital divide due to uneven resource allocation. Creating a secure, trustworthy, equitable, and inclusive digital environment for sports training and education requires the combined efforts of technology creators, sports instructors, training administrators, athletes, policymakers, and society at large. This initiative involves enhancing data security for smart interfaces, promoting human-machine partnership through intelligent augmentation, and ensuring algorithmic fairness while addressing the physical and psychological effects of integrated fiber technologies. By bridging the digital divide through accessible technical solutions, the framework seeks to create a transparent and equitable environment for technology implementation.

AUTHOR CONTRIBUTIONS

Xinping Ye designed, collected and analyzed the data, and drafted the manuscript. Xinping Ye conducted the study, critically revised the manuscript for important intellectual content, and gave final approval of the version to be published. Xinping Ye participated fully in the work, take public responsibility for appropriate portions of the content, and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONFLICTS OF INTEREST

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