

POSSIBILITIES FOR USING ARTIFICIAL INTELLIGENCE IN THE SPORTS INDUSTRY

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Abstract

the article analyzes the use of artificial intelligence in the sports industry, identifies the possibilities of its application, and identifies threats to its implementation in the everyday life of athletes.

Key words

sports industry, artificial intelligence, sports forecasting, analysis of the use of artificial intelligence, monitoring and tracking of athletes, smart technologies.

Introduction. In recent years, artificial intelligence (AI) has become an integral part of the world of sports. It has found wide application in various aspects of sports activities, from predicting the results of competitions to monitoring and accompanying athletes.

One of the key roles played by artificial intelligence in sports is sports forecasting. By analyzing large amounts of data, AI can predict and determine the likelihood of success for teams or individual athletes. This helps coaches and athletes make more informed decisions and create effective strategies to achieve victory.

In addition, artificial intelligence is used to analyze the application of its capabilities in sports. With the help of AI, you can study the tactics and playing style of teams, analyze the technique of athletes and identify their strengths and weaknesses. This allows coaches and athletes to improve their skills and develop individual training programs.

However, despite all the advantages, the use of artificial intelligence in sports also poses certain problems. One of them is dependence on technology. In some cases, athletes or coaches may rely entirely on AI, which can lead to a loss of individuality and intuitiveness in sports activities. It is important to find a balance between using technology and preserving the uniqueness of each athlete.

In addition, the issue of data security also becomes relevant when using artificial intelligence in sports. By collecting and analyzing large amounts of information about athletes, coaches and teams, there is a risk of leakage and unauthorized access to this data. Therefore, it is necessary to develop reliable data protection systems to ensure data confidentiality and security.

Artificial intelligence plays an important role in the world of sports, providing new capabilities for analysis, prediction and training. However, it is necessary to consider both the benefits and challenges associated with the use of AI in sports to ensure the technology is used effectively and safely.

Methods and organization of the study. In this study, the following methods were used: analytical, comparative, system-logical, which made it possible to provide isolation of theoretical conclusions and practical recommendations.

Research results and discussion. Artificial neural networks are a powerful tool that is increasingly being used in various industries, including sports. Artificial intelligence (AI) is one of the main components of ANN and opens up new opportunities for athletes, coaches and fans. Currently, the

sports industry is experiencing a real revolution thanks to the introduction of AI solutions. AI technologies enable the collection, analysis and interpretation of vast amounts of sports-related data, resulting in more effective learning, training and improved performance.

One important aspect of AI in sports is video and data analysis. AI systems can analyze videos of training and competition, providing coaches and athletes with detailed reports on technique, tactics and performance. This helps identify areas for improvement and develop customized training programs. Thanks to AI, coaches and players can gain valuable insight into their weaknesses and strengths, allowing them to improve and reach new heights.

Virtual coaching is another important application of AI in sports. AI platforms can act as virtual coaches, providing athletes with personalized training plans, tracking their progress and providing advice in real time. This is especially useful for those who do not have access to professional trainers or need additional support during training. A virtual coach will help the athlete monitor his achievements, motivate him and give recommendations for improvement.

Another benefit of using AI in sports is the improved rehabilitation of athletes after injuries. AI systems can analyze athlete movement data and provide recommendations for exercises and therapeutic procedures, promoting faster and more effective recovery. This allows athletes to return to training and competition in the shortest possible time.

AI can also help personalize nutrition and recovery for athletes. AI algorithms can analyze data on nutrition, sleep and overall health to create personalized nutrition and recovery plans aimed at improving performance. This allows athletes to optimize their diet and recovery regimen, improving their fitness and endurance.

Dependency on technological solutions providers in the sports sector is becoming increasingly noticeable in the context of the introduction and use of artificial intelligence. Not only sports teams, but also regulatory organizations should be concerned about the potential threats that may arise from the use of AI. For example, the issue of the legality of using athlete data to detect match fixing is extremely important. It is also necessary to consider the possible impact of leaked athlete or match data on live betting results.

Another aspect that requires attention is the recognition of the results of games and bets in the event of hacking of systems, such as virtual assistant referees or analytical services for coaches. It is important to ensure the reliability of the results of assessing the potential of athletes and to prevent possible interference in sporting events through hacking of systems.

There is also a security risk at stadiums if drone surveillance systems are hacked, which could have serious consequences for spectators and participants in sporting events.

Regulators and sports teams must develop effective mechanisms to govern the adoption and use of AI technologies to ensure fair competition and protection from potential threats. This includes strict adherence to regulations and restrictions that will help prevent possible incidents and ensure fairness in the sport.

Conclusions. Artificial intelligence is a powerful tool that can meet all these needs and make sporting events more interesting and accessible for all participants. AI-powered technologies continue to evolve, becoming a key advantage for teams in achieving victories, developing coaches and players, managing operations, attracting new fans and retaining existing audiences.

Sports teams are forced not only to implement individual solutions based on artificial intelligence, but also to create entire strategies based on various AI technologies in order to successfully cope with the challenges of the modern sports world. The use of artificial intelligence in sports requires not only innovation, but also a responsible approach to ensuring safety and fairness in the sports industry.

Implementing AI in sports brings numerous benefits. Increased learning and training efficiency, improved athlete performance and recovery, and reduced risk of injury are all becoming a reality thanks to the application of AI in the sports industry. AI is becoming an indispensable tool for athletes and coaches, helping them reach new heights and overcome challenges.

Artificial intelligence has become an integral part of the sports industry, revolutionizing learning, training and overall performance. From video analysis and predictive analytics to virtual coaching and personalized nutrition, AI is unlocking unprecedented opportunities for athletes, coaches and fans. As these technologies continue to develop, it is expected that AI will continue to play a larger role in shaping the future of sports, providing invaluable benefits and pushing the boundaries of human performance.

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