

# Artificial Intelligence And Its Use In Sports

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## Abstract

Sports is a huge industry also a cultural phenomenon. Sports itself maintains the physical as well as mental health. The development of sports and the new changes influenced by the advances in science and technology. One of these advances is Artificial Intelligence. Artificial intelligence has become a part of our daily lives. Now a days several peoples are using the Artificial Intelligence. Artificial Intelligence provides the benefits in various fields like sports, health, training and in sports journalism. Artificial Intelligence is a branch of computer science it focuses on creating intelligent machines that can perform tasks that need human intelligence. These tasks include reasoning, discovering meaning, generalizing, and learning from past experiences. The objectives of this paper are to review some examples of the applications of Artificial Intelligences in sports and examine how this AI contributes and how the AI shapes the future of sports industry.

**Keywords:** Artificial Intelligence, Sports Journalism, Technology.

## Introduction

The major impact of AI has been continuing to be on the claim production of content as well as the process by which content is matched consumers. Artificial Intelligence is important in markets while using in production of content it may be news or entertainment story. Through AI we can create complex content, judgement, interpretation, creativity, communication. Sports is an activity which maintains the physical and mental health. The development and change of sports influences by the advances in science and technology. The important advance is the Artificial Intelligence. AI has become the important part of our life. For Example, Voice recognition system to our route-finding applications. Many scientists are using AI in other sciences and technology fields like sports. Ai has benefits in many areas of sports such as athletes' performance and Health, preparing training and diet plans, analyzing games and develops the strategies, refereeing, predicting matches, selling tickets and even sports journalism. In this paper researcher examine how the AI contributes in sports and how will AI shapes the future of sports.

## Artificial Intelligence

Artificial intelligence is a young discipline, AI is a set of sciences, theories and techniques including mathematical logic, statistics, probabilities, computational neurobiology, computer science. Artificial Intelligence is a branch of computer science and it focuses on creating intelligent machines can perform the task which require human intelligence. The tasks are reasoning discovering meaning, generalizing, autonomous driving cars, strategic games and learning from past experiences. The AI term was coined in 1956. It become popular for data volumes and the development of algorithms and computations. AI research associated with problem-solving and symbolic methods. Now AI developed with machine learning and it can perform as recognizing speech, images and data, making predications etc. AI and data machine learning is not the same thing. AI is the broader field and it includes the machine learning. Machine learning is a part AI. Artificial Intelligence allows the machine or system to learn and improve automatically from experience.

## Areas of Artificial Intelligence

Artificial Intelligences used in various fields like Medicine, Health, Education, Military, Agriculture, Mining. Media, social media, Marketing, Transportation, Security, Banking and in Business. In the field of diagnosis and treatment processes of diseases can be completed almost flawlessly with AI technology. Ai also used in medical imaging, drug production and management, robotic surgery, banking sector for customer service.

### **The use of Artificial Intelligence in sports**

AI has made many developments in the sports including in the last five years. The AI used in sports field for main four categories.

**Chatbots:** Chatbots are typically online and use generative AI systems that are capable of maintaining a conversation with user in natural language. In sports chatbots used to answer fan questions on a larger range of topics with live games information, team statistics, gym and stadium information. AI can help athletes track their daily calorie intake, suggest meal plans, remind and suggest the necessary supplements. Ai also teaches importance of nutrition to athletes.

**Computer Vision:**Computer vision is a field of artificial intelligence that enables computers and systems to derive meaningful information from digital images, videos and other visual inputs and also take actions or make recommendations based on that information. Computer vision helps to understand the visual world. This develops the algorithms and techniques that allows computers to recognize and interpret images and videos. Computer vision can process image data from various sources like camera and sensors. Computer vision used in sports for analyses in sports. E.g. football, Basketball, Cricket, Badminton. Through this technology we can categorizing players, tracking players, predicting players, recognizing team strategies in different sports events. Computer vision is mostly used to help referee decisions.

**Robot Journalism:** News stories are created by computer programs in automated journalism, this also known as algorithmic journalism or robot journalism. These AI programs analyze, organize and present data in a form that is understandable to humans. Three advantages of robot journalism are speed, cost and free of errors. In sports world this robot journalism increases the revenues by using AI. So, sports news becomes faster and more professionally.

**Wearable Technology:**this is kind of electronic device designed to be worn on the body. This includes the AI. The technology uses in Health fitness, Sports, Entertainment and gaming, Healthcare and medical, and also in fashion. This technology use to track and receive notification for heart rate, Blood Pressure, calories intake or manage their training. AI can be used in sports training for improve the performance of athletes and team. AI covers many areas in sports analytics. The first is player performance analytics. AI can analyze the statistical data of an athlete or team and identify their strengths and weaknesses in the game. The second is team performance analytics. AI can analyze the way teams work together and their game strategies, and evaluate team performance. The third is injury prevention and recovery. AI can be used to predict and prevent injury risks in athletes. By analyzing the training data and physiological parameters of athletes, it is possible to identify potential injury risks. In addition, the use of AI in the recovery process after injury is also important.

### **The benefits of artificial intelligence in sports training**

- 1.AI Enhanced coaching
2. Improve the player Performance
- 3.Improve the decision making and predication
4. Training and game strategy optimization
5. More efficient injury prevention
6. Data-driven, bias-free decisions
7. More accurate refereeing decisions
8. Sports democratization
9. Fan engagement
10. Increased revenues
- 11.Automation of time-consuming processes

## Challenges

1. AI systems can make wrong decisions based on wrong or incomplete data.
2. Reduce the competitive or fun aspect of sports.

## Conclusion

AI is increasingly used in sports as in many other fields. AI can also be used to predict sports betting. The use of AI in sports improves the sports industry and sports culture. Sports itself maintains the physical and mental health. The development of sports and the changes influenced by the advances in science and technology. One of these advances is artificial intelligence. Artificial intelligence has become a part of our day today lives.

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