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Role of Artificial Intelligence in Performance Enhancement among Football Players: A Narrative Review

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ABSTRACT

The implementation of Artificial Intelligence (AI) in football has significantly risen because of its extraordinary effectiveness. Athletes are significantly impacted by muscle re-injuries, especially in football. Poor performance and long-term health problems are the outcomes of these injuries. Initially, football was a game devoid of technological advancements but technology has progressed to the point that it is now necessary for tracking player performance and analysing matches. An athlete's performance can be understood, interpreted, and eventually improved with the help of AI-powered computer vision algorithms, significantly enhance the extent of performance analysis in sports, boosting accurate strategic planning, and optimising overall team performance, by recognising areas of weakness or projecting prospective injuries, athletes can take proactive actions to cope with these difficulties. The views aim to envision and build AI-driven tools to improve tactical analysis along with performance examination, for providing coaches and players accurate, data-driven insights through the integration of AI technology. These insights can guide strategic choices, streamline training procedures, and eventually enhance overall competitiveness.This review excluded non-English articles that highlights the role of AI in performance enhancement among football players. Searches were carried out in the following databases: PubMed, Google Scholar, ResearchGate from published articles since 2015-2024. The result shows that AI technology creates new opportunities to enhance the objectivity and precision in performance evaluation by identifying hidden trends and patterns in games. Potential limitations such as the high expense and difficulty of putting AI systems into practice, as well as ethical issues like data privacy. In conclusion, AI effectively manages player performance and growth, providing coaches with useful data regarding player performance and potential physical ailments.

Keywords: Artificial intelligence-driven tool, Athletic injuries, Strategic planning