**ABSTRACT**

The development of artificial intelligence (AI) systems capable of autonomously learning complex motor skills is a significant milestone in robotics and machine learning. This paper presents a novel AI framework designed to teach itself to walk without pre-programmed instructions or human intervention. Leveraging advanced reinforcement learning algorithms and a simulated physical environment, the AI model iteratively improves its locomotion strategies through trial and error. The framework incorporates neural networks that adapt to dynamic changes and unforeseen obstacles, emulating the natural learning processes found in biological organisms. Experimental results demonstrate that the AI can achieve stable bipedal locomotion, showcasing its potential for real-world applications in robotics, prosthetics, and autonomous exploration. This study underscores the transformative capabilities of self-learning AI and paves the way for future innovations in autonomous systems. Future work will focus on enhancing the robustness and versatility of the AI's locomotion capabilities. This includes developing algorithms for multi-legged robots and improving the AI's ability to navigate more complex and dynamic environments. Additionally, the integration of human feedback mechanisms may provide further refinement and customization of walking behaviours, leading to more natural and human-like motion patterns. In conclusion, the development of an AI that learns to walk by itself represents a pivotal advancement in autonomous systems. By harnessing the power of deep reinforcement learning, this research demonstrates the potential for AI to achieve complex motor functions through independent learning and adaptation. The findings lay the groundwork for future innovations in robotics, prosthetics, and beyond, where autonomous and adaptive systems can significantly enhance human capabilities and quality of life.

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