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## (57) Abstract:

The present invention relates to a motion gesture-based gaming control system that enables users to interact with digital games through body movements. Utilizing advanced motion detection, gesture recognition, and real-time communication technologies, the system provides an immersive and intuitive gaming experience. The system incorporates key components such as a motion detection unit (e.g., cameras or motion sensors), a gesture recognition module powered by machine learning frameworks (e.g., MediaPipe and TensorFlow), and a game logic unit that integrates recognized gestures into in-game actions. The system processes body movements, analyzes them for predefined gestures, and translates these gestures into game controls, eliminating the need for traditional input devices like controllers or keyboards. The technology supports low-latency real-time communication, ensuring seamless interaction between the user and the game. This gesture-based approach not only enhances the user experience but also broadens accessibility, offering potential applications in gaming, virtual reality (VR), and augmented reality (AR) environments.

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