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Integrated Gesture and Voice-Activated Mouse Control System

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Abstract : The project aims to provide a touchless, intuitive interface for human-computer interaction, enabling users to control their computers using hand gestures and voice commands. The system leverages advanced computer vision techniques using the Media Pipe framework and OpenCV to detect and interpret real-time hand gestures, transforming them into mouse actions such as clicking, dragging, and scrolling. Additionally, the integration of a voice assistant powered by the speech recognition library allows for seamless execution of tasks like web searches, location navigation, and gesture control in the system through voice commands.

Keywords : gesture recognition, hand tracking, machine learning, convolutional neural networks, natural language processing, voice assistant
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