

# Virtual Mouse using Hand Gestures

**Janhavi Mahajan, Akshata Majgaonkar, Mukta Mali, Ananya Verma, Poonam Chavan**

Department of Computer Engineering

Pimpri Chinchwad Polytechnic, Pune, Maharashtra, India

mahajanjanhavi54@gmail.com, akshatam2511@gmail.com, muktamali7815@gmail.com

ananyaverma1501@gmail.com, poonamdhmal1010@gmail.com

**Abstract:** *The concept introduces a system that enables the control of a virtual mouse using hand gestures, eliminating the need for physical input devices. The system uses computer vision and machine learning techniques to interpret hand movements captured by a depth-sensing camera. A trained convolutional neural network recognizes these gestures, achieving an average accuracy of 90%. The system's responsiveness is comparable to traditional mouse input, and user feedback indicates high satisfaction due to the natural and intuitive interaction. This research holds promise for enhancing human-computer interaction in areas like gaming, virtual reality, and accessibility technologies.*

**Keywords:** hand gestures, Depth-sensing, human –computer interaction.

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