

# Virtual Mouse by Means of Manual Gestures

**L. Prabhavathi<sup>1</sup>, K. Indhira<sup>2</sup>, C. Dilli Rani<sup>3</sup>, A. Meena<sup>4</sup>, B. Mohan Sai<sup>5</sup>, A. Poornesh<sup>6</sup>**

Assistant Professor, Department of Electronics and Electrical Engineering<sup>1</sup>

UG Students, Department of Electronics and Electrical Engineering<sup>1,2,3,4,5</sup>

Sri Venkatesa Perumal College of Engineering and Technology, Puttur, AP, India

**Abstract:** *The main aim to perform the mouse cursor operations and scrolling function and also move the cursor. A professional webcam, novel process of managing mouse click was developed. The integration of different efforts would include changing keypad elements, integrating more keys, or shifting the monitoring ball's placement. However, they recommend that the hardware design be altered. The proposed approach solves present inadequacies as well as utilized of a hardware mouse, but also numerous motions cause injury in the palms. It should be predicated on a visualization impact of motion, accompanied by artificial intelligence technology, image classification, and motion tracking, to regulate mouse tasks (left and right-clicking, double-clicking, and scrolling), as well as Machine Cognitive approach to obtain a greater virtual touchpad to the current systems. A camera should be used to capture palm motions.*

**Keywords:** Machine Cognitive approach, Virtual mouse, Manual gestures

## REFERENCES

- [1]. Banerjee, A. Ghosh, K. Bharadwaj, H. Saikia, Mouse Control using a WebCamera based on Colour Detection, Int. J. Comput. Trends Technol. 9 (2014) 15-20. doi:10.14445/22312803/ijctt-v9p104.
- [2]. A.A. Argyros, M.I.A. Lourakis, Vision-based interpretation of hand gestures for remote control of a computer mouse, Lect. Notes Comput. Sci. (Including Subser. Lect. Notes Artif. Intell. Lect. Notes Bioinformatics). 3979 LNCS (2006) 40–51. doi:10.1007/11754336\_5.
- [3]. Yu-Luen Chen, Application of tilt sensors in human-computer mouse interface for people with disabilities, IEEE Trans. Neural Syst. Rehabil. Eng. (2002) 289–294. doi:10.1109/7333.948457.
- [4]. D.G. Evans, R. Drew, P. Blenkhorn, Controlling mouse pointer position using an infrared head-operated joystick, IEEE Trans. Rehabil. Eng. 8 (2000) 107–117. doi:10.1109/86.830955.
- [5]. Y. Chen, E.R. Hoffmann, R.S. Goonetilleke, Structure of Hand/Mouse Movements, IEEE Trans. Human-Machine Syst. 45 (2015) 790–798. doi:10.1109/THMS.2015.2430872.
- [6]. D.G. Evans, R. Drew, P. Blenkhorn, Controlling mouse pointer position using an infrared head-operated joystick, IEEE Trans. Rehabil. Eng. 8(2000)107– 117. doi:10.1109/86.830955.
- [7]. Y. L. Chen, F. T. Tang, W. H. Chang, M. K. Wong, Y.Y. Shih, and T. S. Kuo, “The new design of an infrared-controlled human-computer interface for the disabled,” IEEE Trans. Rehab. Eng., vol. 7, pp. 474–481, Dec. 1999.
- [8]. Kannadhasan and R.Nagarajan, Design and Development of Environmentally W-Shaped Structure Antenna for Wireless Applications, International Web Conference on Smart Engineering Technologies(IWCSET 2020), 26-27 June 2020, Ramco Institute of Technology, Rajapalayam, ISBN:978-93-5407-648-0, Published in Journal of Green Engineering, Volume 10, Issue 9, September 2020
- [9]. R. D. Richard, B. Stein, B. J. Andrews, K. B. James, and M. Wieler, “Application of tilt sensors in functional electrical stimulation,” IEEE Trans. Rehab. Eng., vol. 4, pp. 63–71, Mar. 1996.
- [10]. Z. A. Keirn and J. I. Aunon, “Alternative modes of communication between man and his surroundings,” IEEE Trans Biomed. Eng., to be published.
- [11]. S.Kannadhasan, M.Shanmuganantham, R.Nagarajan, and S.Deepa, Future Progress in Artificial Intelligence: Process and its Applications, Virtual International Conference on Metamorphosis of Modern Management

and Research, 13 August 2020, Bannari Amman Institute of Technology, Sathyamangalam, Published for International Journal of Innovative Research in Computer and Communication Engineering, e-ISSN: 2320-9801, p-ISSN: 2320-9798, Volume 8, Issue 12, December 2020, DOI: 10.15680/IJIRCCE.2020.0812007, Impact Factor: 7.488

- [12]. Dhuddu Haripriya, Venkatakirana S, Gokulachandar A, "UWB-Mimo antenna of high isolation two elements with wlan single band-notched behavior using roger material", Vol 62, Part 4, 2022, Pg 1717-1721, <https://doi.org/10.1016/j.matpr.2021.12.203>
- [13]. Gokula Chandar A, Vijayabhasker R., and Palaniswami S, "MAMRN – MIMO antenna magnetic field", Journal of Electrical Engineering, vol.19, 2019.
- [14]. Rukkumani V , Moorthy V, Karthik M , Gokulachandar A, Saravanakumar M, Ananthi P, "Depiction of Structural Properties of Chromium Doped SnO2 Nano Particles for sram Cell Applications", Journal of Materials Today: Proceedings, vol.45, pp.3483-3487, 2021. <https://doi.org/10.1016/j.matpr.2020.12.944>
- [15]. GokulaChandar ,Leeban MosesM; T. Perarasi M; Rajkumar; "Joint Energy and QoS-Aware Cross-layer Uplink resource allocation for M2M data aggregation over LTE-A Networks", IEEE explore, doi:10.1109/ICAIS53314.2022.9742763
- [16]. G.Srividhya, R.Nagarajan and S.Kannadhasan, Enhancement of Clustering Techniques Efficiency for WSN Using LEACH Algorithm, International Conference on Advances in Smart Sensor, Signal Processing, and Communication Technology (ICASSCT 2021), Goa University, Goa, 19-20 March 2021, Published for IOP Journal of Physics: Conference Series, Vol No: 1921, 2021, doi:10.1088/1742-6596/1921/1/012013

## BIBLIOGRAPHY



**K. Indhira,**  
UG Student,  
Dept Of ECE,Svpct  
Area Of Interest: Wireless Sensor  
Network, Mobile Communication



**C. Dilli Rani,**  
UG Student,  
Dept Of ECE,Svpct  
Area Of Interest: Wireless Sensor  
Network, Mobile Communication



**A. Meena,**  
UG Student,  
Dept Of ECE,Svpct  
Area Of Interest: Wireless Sensor  
Network, Mobile Communication



**B. Mohan Sai,**  
UG Student,  
Dept Of ECE,Svpct  
Area Of Interest: Wireless Sensor  
Network, Mobile Communication



**A. Poornesh,**  
UG Student,  
Dept Of ECE,Svpct  
Area Of Interest: Wireless Sensor  
Network, Mobile Communication