

Air Writing

Dr. (Mrs) S. K. Wagh¹, Arya Tamhane², Disha Dalvi³, Sanvidha Haribhakta⁴, Sakshi Malvadkar⁵

Associate Professor, Department of Computer Engineering¹

U.G. Student, Department of Computer Engineering^{2,3,4,5}

MES Wadia College of Engineering, Pune, India

Abstract: *The Air Writing Recognition System is a exploration of machine learning and computer vision technology, redefining the landscape of human-computer interaction. This system enables users to convey messages by shaping letters in the air, and its recognition. The primary objective is the accurate recognition of individual letters, both English and Devanagari scripts. The system is created with Python as the primary language, employing TensorFlow and Keras for machine learning models, and integrating MediaPipe for precise hand tracking and detection. The development environment includes widely used IDEs Jupyter Notebook and Visual Studio Code. This project holds diverse applications, in education and language learning to creative expression and cross-cultural communication*

Keywords: Air-writing, Tenserflow, Keras, Machine Learning, MediaPipe