

Computer Vision for Hand Signal Communication with Mediapipe and Support Vector Machine (SVM)

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ABSTRACT

This study utilized machine learning to design and assess the accuracy of computer vision for hand signal communication. The machine learning techniques used in this study include classification approaches that use Support Vector Machine (SVM) for picture categorization of hand gestures. In this research, Python, Artificial Neural Networks, Scikit-learn, and Mediapipe were also employed. This project will benefit handicapped persons who have communication challenges, or, to put it another way, people who have speech disorders. Regular individuals, as we all know, may say whatever they want and others will understand them; however, persons with speech disorders will find it difficult to communicate with normal people because they are unable to utilize their voice in the same manner that others do. As a result, the primary goal of this project is to make it easier for disabled and non-disabled individuals to communicate with one another.

Keywords: Hand signal communication, Computer vision, Machine learning, Python, Neural networks