ABSTRACT

Hand gesture recognition is an important task in computer vision that has applications in various fields, including human-computer interaction, sign language recognition, and gaming. In recent years, Convolutional Neural Networks (CNNs) have achieved state-of-the-art performance on many computer vision tasks, including hand gesture recognition. In this project, we propose a CNN-based approach for hand gesture recognition. We first preprocess the hand images to remove the background and enhance the edges of the hand. We then use a CNN architecture with multiple convolutional layers and fully connected layers to learn discriminative features from the hand images. We train the network using a large dataset of hand gesture images and evaluate its performance on a separate test set. Our experimental results show that our proposed approach achieves high accuracy on hand gesture recognition compared to existing methods. The results demonstrate the effectiveness of using CNNs for hand gesture recognition and suggest that our approach has potential for real-world applications. Hand gestures are the most common forms of communication and have great importance in our world. They can help in building safe and comfortable user interfaces for a multitude of applications. Various computer vision algorithms have employed color and depth camera for hand gesture recognition, but robust classification of gestures from different subjects is still challenging. I propose an algorithm for real-time hand gesture recognition using convolutional neural networks (CNNs). The proposed CNN achieves an average accuracy of 98.76% on the dataset comprising of 9 hand gestures and 500 images for each gesture.