

Institutional Sign In

BROWSE

MY SETTINGS

GET HELP

WHAT CAN I ACCESS?

SUBSCRIBE

Full Text

Need Full-Text
access to IEEE Xplore for your organization?

REQUEST A FREE TRIAL >

Abstract

Authors

Figures

References

Citations

Keywords
View All Authors

Footnotes

Browse Conferences > Signal and Information Proces...

Dynamic hand gesture recognition

Sign In or Purchase
to View Full Text

2
Author(s)

Rajeshree Rokade-Shinde ; Jayashree Sonawane

Abstract

Authors

Figures

References

Citations

Keywords

Metrics

Media

Back to Top

Abstract:

Recognition of dynamic gesture is one of the most challenging tasks in the computer vision. This paper deals with dynamic hand gesture (digits) recognition. The method consist of three fold novel contributions: firstly finding the flow of hand, secondly recognition technique of signs (Dynamic digits) and thirdly classification of gesture. We worked on 11 to 20 (digits) gestures. Spatiotemporal volume is not always sufficient to grasp the flow of hand movement. We proposed new method to find flow of hand for special signs. Features are extracted using proposed feature extraction algorithm and gestures are recognized. Proposed algorithm shows recognition efficiency of 94% for dynamic gestures. Time complexity of the given method is less as compared to some traditional methods.

Published in: Signal and Information Processing (ICONSIP), International Conference on

Date of Conference: 6-8 Oct. 2016

INSPEC Accession Number: 16674224

Date Added to IEEE Xplore: 16 February 2017

DOI: 10.1109/ICONSIP.2016.7857476

ISBN Information:

Publisher: IEEE



Download PDF

Download Citations

View References

Email

Print

Request Permissions

Export to Collabratec

I. Introduction

Sign recognition is achieved in three steps. Region of interest or segmentation, feature extraction and classification. Segmentation is to separate out hand portion clearly. Many segmentation algorithms' efficiency is high for particular database. Either particular light conditions are essential or uniform and plane background is essential or the hand position must be in middle of the image. Peer et al. [1] proposed RGB segmentation. This is more sensitive to light conditions. Stergiopoulou and Papamarkos [2] proposed YC_bC_r based image segmentation. Plain and uniform background is essential in YC_bC_γ based image segmentation. Rokade et al. [3] used segmentation algorithm where hand position matters. In some approaches [4], specialized gloves with particular background color are essential.

Read document

Keywords

IEEE Keywords

Heuristic algorithms, Algorithm design and analysis, Feature extraction, Classification algorithms, Gesture recognition, Image segmentation, Trajectory

INSPEC: Controlled Indexing

gesture recognition, computational complexity, computer vision, feature extraction

INSPEC: Non-Controlled Indexing

time complexity, dynamic hand gesture recognition, computer vision, hand flow, sign recognition technique, dynamic digit recognition, gesture classification, spatiotemporal volume, hand movement, feature extraction

Author Keywords

classification, Hand segmentation, hand flow detection using chain code, feature extraction algorithm

Authors

Rajeshree Rokade-Shinde

Lokmanya Tilak College of Engineering, Koperkhairne, Navi Mumbai, India

Jayashree Sonawane

Lokmanya Tilak College of Engineering, Koperkhairne, Navi Mumbai, India

[Full Text](#)[Abstract](#)[Authors](#)[Figures](#)[References](#)[Citations](#)[Keywords](#)[Footnotes](#)[Back to Top](#)[Personal Sign In](#) | [Create Account](#)**IEEE Account**[» Change Username/Password](#)[» Update Address](#)**Purchase Details**[» Payment Options](#)[» Order History](#)[» View Purchased Documents](#)**Profile Information**[» Communications Preferences](#)[» Profession and Education](#)[» Technical Interests](#)**Need Help?**[» US & Canada: +1 800 678 4333](#)[» Worldwide: +1 732 981 0060](#)[» Contact & Support](#)

[About IEEE Xplore](#) | [Contact Us](#) | [Help](#) | [Terms of Use](#) | [Nondiscrimination Policy](#) | [Sitemap](#) | [Privacy & Opting Out of Cookies](#)

A not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.

© Copyright 2017 IEEE - All rights reserved. Use of this web site signifies your agreement to the terms and conditions.