Abstract

Vision is the task of “seeing”. When human see things, their eyes (sensing device) capture the image, then pass the information to brain (interpreting device). The brain interprets the image, gives us meanings of what human see [35]. Similarly, in computer vision, camera serves as sensing device, and computer acts as interpreting device to interpret the image what the
camera captures. Gestures are expressive meaningful body motions i.e., physical movements of the hands, arms, fingers, head, face or other parts of the body with the intent to convey information or interact with the environment[12]. Gestures are used for everything from pointing at a person or an object to change the focus of attention, to conveying information. Gestures, which function independently of speech, are referred to as autonomous gestures. Autonomous gesture can also represent motion commands to use in communication [15] and machine control. Gesture recognition is the process by which gestures made by the user are made known to the intelligence system. The core objective of the proposed work is to detect and recognize various facial gestures that are present in a given image using Gabor filter and use it for automation. The performance of the proposed method is evaluated using Gabor filtering and compared with the other methods namely wavelet and neural networks. Finally, it is concluded that the proposed method shows better performance over the other methods.

Reference

- Qingshan Zhang, Zicheng Liu, Baining Guo, Demetri Terzopoulos, Heung-Yeung Shum"Geometry-Driven Photorealistic Facial Expression Synthesis” IEEE Transactions on visualization and computer graphics 2006 pg 48 – 60
- Douglas Fidaleo, Mohan Trivedi “Mainfold analysis of facial gestures for face recognition”, WBMA’03 ACM 2003 pg 65-69
- online Available:
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- P. Sinha, B. J. Balas, Y. Ostrovsky and R. Russell "Face recognition by humans: 19 results all computer vision researchers should know about", Proc. IEEE, vol. 94, no. 11, pp.1948 -1962

Index Terms

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Key words

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