

Título Facial Expression Recognition based on Static and Dynamic Approaches

Tipo de Producto Ponencia resumen

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Publicado: 23th International Conference on Pattern Recognition, Cancún, México.

Código del Proyecto y Título del Proyecto

A15T14 - Reconocimiento de Acciones en Video

Responsable del Proyecto

Pablo Negri

Línea

Procesamiento de señales

Área Temática

Informática

Fecha

Diciembre 2016

INTEC

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Facial expression recognition based on static and dynamic approaches

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Abstract:

The identification of facial expressions with human emotions plays a key role in non-verbal human communication and has applications in several areas. In this work, we analyze two main approaches for expression recognition. One is a dynamic approach introducing a new simple descriptor based on the angles formed by the landmarks to capture the dynamic of the facial expression on a sequence. In this case the recognition is performed by a Conditional Random Field (CRF) classifier. An analysis of the most discriminative landmarks for this approach is presented. The other is a static-based appearance method. In this approach, a binary-based descriptor, denominated Oriented Fast and Rotated BRIEF (ORB), is used on a single frame of a sequence of images to extract texture information, and classified with a Support Vector Machine. We compare both methodologies, analyse their similarities and differences, and also propose simple combinations of both approaches to deal with their limitations.

Publicación completa en: <https://doi.org/10.1109/ICPR.2016.7900280>