UW CENTER FOR
PATTERN ANALYSIS AND MACHINE INTELLIGENCE

GRADUATE SEMINAR SERIES

An Unsupervised Approach for Facial Expression Categorization

Speaker: Rodrigo Araujo

Date: December 21, 2011

Time: 4:30 pm – 5:00 pm

Place: E5 (5128) Refreshments will be served

Abstract :

Facial expression is one of the main elements of nonverbal communication. Recently, a lot of effort has been made to automatically recognize and analyze these expressions from images and videos. However, most work in facial expression analysis is based on supervised approaches, and on individual subjects rather than a group. In classic clustering problems, the features of the data points are assumed to be static. However, there are a lot of applications where the features are constantly changing. Clustering in such environments raises additional issues, including continuously rebuilding the state of the clusters at specific times. The objective of this work is to propose an unsupervised approach to perform facial expression clustering in on-line video of multiple subjects in constantly changing environments by extending the functionality of the algorithm Affinity Propagation. Preliminary results on two datasets showed that the proposed method outperformed the original approach in terms of time processing.

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