



Train a computer to classify pictures and videos based on the elements that they contain

By EurekAlert

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This release is available in [Spanish](#).

[University of Granada](#) researchers have developed a new computer technique that allows to "train" computers to interpret the visual contents of a video or picture. This advance will allow to classify automatically pictures basing on whether individuals or specific objects are present in such images. Videos can also be classified according to specific poses.

At present, computer search and classification of images is made basing on the name of the file, folder or on features as date or size, but the visual information contained was never used for classification purposes. This study conducted by the [University of Granada](#) will allow to employ this parameter in the short term for classifying videos according to actions performed by individuals.

The research conducted by Manuel Jesús Marín Jiménez, who is currently working at the University of Córdoba, and coordinated by Professor Nicolás Pérez de la Blanca Capilla, Department of Computing and Artificial Intelligence, [University of Granada](#).

A Specific Pose

Apart from detecting individuals in TV video/film shots, this new technique allows to estimate the position of upper limbs (head, chest, arms and forearms) and the automatic classification of video scenes where people appear in a specific pose. Human actions such as walking, jumping, bending down, etc. can also be detected in video sequences.

As Marín Jiménez explains, currently, there is great interest in important international companies as Microsoft or Google in making computers interpret automatically the visual contents of images and video. "Our work is a contribution towards progress in this demanding challenge" the researcher states.

The results of this research have been presented in a number of international conferences such as the International Conference in Pattern Recognition (2006), and the conference on Computer Vision and Pattern Recognition (2008 and 2009).

Example Images:

- People detection on TV: <http://www.robots.ox.ac.uk/~vgg/software/UpperBody/index.html>
- Estimation and recognition of human poses: http://www.robots.ox.ac.uk/~vgg/research/pose_estimation/index.html

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