

Intelligent system to help autistic children recognize emotions

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Computer scientists from Nanyang Technological University in Singapore are working on the development of an efficient and intelligent facial expression recognition system. The system is capable of locating the face region using derivative-based filtering and recognizing facial expressions using boosting classifier. The portable device is being developed to help autistic children understand the emotions of surrounding people.

A paper detailing the specifics of the device will be published in the journal *Intelligent Decision Technologies* (Volume 3:3).

Teik-Toe Teoh, Yok-Yen Nguwi and Siu-Yeung Cho of the Centre for Computational Intelligence of the School of [Computer Engineering](#) of Nanyang Technological University state that "emotion is a state of feeling involving thoughts, physiological changes, and an outward expression. In this paper, we propose a system that synergizes the use of derivative filtering and boosting classifier. "

The portable facial expression recognizer locates the edge of the human face through Gaussian derivatives, Laplacian derivatives and filter out non-face images using Adaboost. Secondly, the feature locator finds crucial fiducial points for subsequent feature extraction and selection processing. Finally, the meaningful features are classified into the corresponding classes.

More information: The paper is entitled 'Towards a Portable Intelligent

Facial Expression Recognizer' and is now available online:
[iospress.metapress.com/content ... de9186f584e2π=1](https://iospress.metapress.com/content/10.1007/978-1-4939-9186-5_1)

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