Track Analysis and Attentive Focus Determination of Multiple Moving Humans

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ABSTRACT

Due to the increasing of living quality, electric signage plays an essential role in our lives. Thus, more and more information that we need can be obtained through a variety of advertisements upon electric signages. However, mostly electric signage systems charge for announcement according to broadcast schedule rather than visit frequency, causing an unfairly charging phenomenon for enterprises.

Therefore, how to discriminate whether pedestrian pay attention to advertisements or not is an extremely significant issue. To do so, we must consider differently facial pose and some problems, including facial size, occluded state, and so on. Moreover, we also make analyses with moving paths. First of all, we use background subtraction to extract foreground object, in order to detect facial region accurately. Besides, our research decreases searching space and filter out the complex scene by adding functionality of skin color detection, and further rapidly detects facial location following experimental results of foreground size detection, so that it can reduce detecting time and avoid occurring inaccuracy. Finally, the facial region of detecting outcome and moving paths will be traced and analyzed, then we can make classifications according moving paths, and at the same time judge pedestrian's concentrative degree for advertisements according to characteristic of different classifications.

Keywords : face detection、foreground object detection、background subtraction、attentive focus determination

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