

基于智能移动终端触屏行为的情绪识别

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摘 要: 提出了在移动终端上通过手指触屏行为感知用户情绪的方法.该方法首先把用户情绪分为四类: 轻松、兴奋、烦躁和无聊, 进而提出了一组基于情绪检测的手指触屏行为特征属性, 通过 ReliefF 算法分析本组特征对情绪识别的影响并从中筛选出核心特征属性.最后利用核心特征属性分别使用 ANN 和 SVM 分类算法获得对四种情绪的识别率.实验证明, 提出的基于手指触屏行为的情绪识别方法能够较为准确地识别出用户在使用移动设备时的情绪状态.

关键词: 情绪识别; 人机交互; ReliefF 算法; 触屏行为; 情绪触摸

Emotional State Detection from Touch-Based

Behavior on Touch-Screen Device

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Abstract: This paper presents an attempt to recognize user emotion from finger-stroke pattern through analyzing current situation of emotion recognition applied to the touchscreen devices. There are four emotional selected for our analysis : relaxed, delighted, irritated, boring. First, we propose a set of features for emotion detection based touch-screen behavior. Then, ReliefF is used to analyze the effectiveness of these features and some important features are chosen from them. Finally, ANN and SVM are used to verify the recognizing rate of these chosen features. The experiment results proved that the method based on finger touch-screen behavior can identify the users' emotional state comparatively accurate when they using touch-screen device.

Key words: emotion recognition; HCI; ReliefF algorithm; touch behavior; affective touch

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