



(1)

Detection of Hidden Laughter for Human-agent Interaction

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Abstract:

Our goal is to make a system to detect the times at which one almost laughed but he or she did not show their laughter on his/her face. We define this kind of laughter as hidden laughter. To accomplish this goal, we first tried making decision trees to detect one's amusement, the input data of which were physiological indices. We used 10-fold cross validation to evaluate the trees, and their accuracy was more than 70%. In addition, we investigated the effect of cultural background on the accuracy.

Keywords:

laughter; hidden laughter; physiological index; FEMG; SCR; ECG; diaphragm

Published In:

Procedia Computer Science , 35 , 1053-1062



(2)

Human-like motion of a humanoid in a shadowing task

Yasser Mohammad, Toyoaki Nishida

Abstract:

Humanoid robots have - by definition - some level of human-likeness in body form. According to previous research in HRI, this leads to a higher expectation of human-like behavior. Nevertheless, human-likeness is not an easy notion to define for motion even in a task as straight forward as real-time motion copying (the shadowing task) as this paper will try to argue. The main hypothesis of this paper is that subjective evaluation of robot's motion's human-likeness depends not only on the objective similarity between robot's motion and human motion but also on the interaction context (e.g, whether or not the human have previously engaged in mutual or back imitation with the robot). Moreover, the paper proposes two features of motion similarity that affect subjective evaluation of human-likeness and accuracy in the shadowing task and shows that human-likeness is a different attribution dimension form both accuracy and humanness (measured using human-nature traits). The paper reports a controlled user study involving 36 participants and 108 HRI sessions to support these claims.

Published In:

Collaboration Technologies and Systems (CTS), 2014 International Conference on , , 123 - 130



(3)

Why should we imitate robots?

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Abstract:

Previous research in HRI have shown that human's subjective evaluation of robot's abilities affect the way people interact with robots. Given that one of the major challenges in learning from demonstration in robotics is the limited number of training examples that the demonstrator is usually willing to provide, it would be beneficial to design the interaction context in such a way to increase human's subjective evaluation of the robot's imitative skills. We propose back imitation as a way to achieve that goal. This paper reports the results of a preliminary study that was conducted to evaluate the effect of back imitation on human's subjective evaluation of the robot along several dimensions including imitation skill, motion human likeness, interaction quality, humanness and likability.

Keywords:

Human-Robot Interaction, Imitation, back imitation

Published In:

Proceedings of the 2014 international conference on Autonomous agents and multi-agent systems , , 1499-1500



(4)

COLD: A ROS package for continuous Learning from Demonstration teaching a robot to write

M Hussein, Y Mohammad, S A Ali

Abstract:

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Keywords:

NULL

Published In:

Mechatronics and Automation (ICMA), , NULL , NULL



(5)

Exact multi-length scale and mean invariant motif discovery

Mohammad, Yasser; Nishida, Toyooki

Abstract:

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Keywords:

NULL

Published In:

Springer New York LLC , vol. 44, issue 2 , NULL