Head Movement Analysis in Lie Detection

Doru-Ionuț NOJE

Abstract

This document presents a study regarding the potential of head movement in lie detection. The potential was analyzed using a non-invasive technique that detects the head movement out of video. In the literature there is a lot of information regarding lie indicators and for this reason we made a short review of them. Application was built in order to detect the head movement and head position by performing a frame-to-frame analysis on a color video stream. Tests were performed on a group of ten volunteers and the results confirmed the theory. A correlation was made between head movement/ position and lie detection. Although the results confirmed the theory they are not concluding because this information cannot be used without other additional information from the other information channels like voice, words, gaze and others. Users must correlate the responses of the suspect with the response of the application in order to decide what the verdict is.

Biography

Doru Noje is an IT Business Analyst in Tenaris Silcotub, Zalău. He received his engineer diploma from Technical University of Cluj, Faculty of Electronics, Telecommunications and Information Technology in 2009. He is now taking master courses at the same faculty, section SICAS, second year of study. When he is not at work writing code he is at home doing the things that he likes. He is passionate about reading people emotions from non-verbal language, going out with friends and spending time into the nature.

Doru-Ionut NOJE, MSc student
Technical University of Cluj-Napoca
Faculty of Electronics, Telecommunications and Information Technology,
28 Memorandumului Street, 400114 Cluj-Napoca, ROMANIA
E-mail: noje_doru@yahoo.co.uk