Evaluation of User Explicit Feedback Based on his Implicit Feedback Measurement

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Implicit feedback can provide us with information that we can use to help us evaluate online questionnaires. Using this information, we could eliminate number of necessary explicit feedback and we can better evaluate the results. This would allow us to simplify the questionnaires and also improve the result quality. Explicit information from the user may be incomplete or misleading. This is currently being dealt with using complicated questionnaires and forms asking the same question multiple times differently, to avoid getting misleading information.

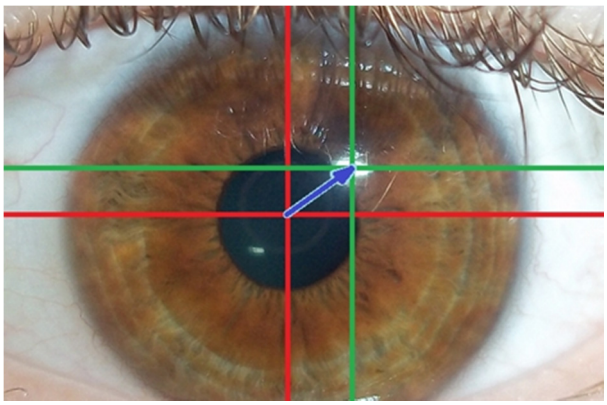

Figure 1. Example of how is pupil dilation measured.

Using implicit measures as pupil dilation, eye-tracking, galvanic skin response or skin temperature, we could predict if user is trying to deceive us or is lying to us. Using these implicit measures from the users when filling out online questionnaires would allow us to eliminate the number of the questions needed to ensure the needed quality

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of the results and also would significantly improve the results of the questionnaires by eliminating deceptive and false answers from our result set.

Deceptive behavior cam be cognitively difficult. Therefore using implicit measures to measure cognitive load can be useful for our work. One of the measures that can indicate cognitive load is pupil dilation (shown in Figure 1) [2,3] It has been shown, that pupils of a sender when sending deceptive message dilate and they dilate more with bigger deception. [1] However, pupil dilation can be affected by many factors, such as temperature, light or stress and it cannot differentiate between visually and cognitively demanding tasks [3]. Therefore there is need to apply other measures, that can help us with user state specification.

One of these can be blink rate. Blinking can be also indicator of increased cognitive effort [4,5]. Another measure is gaze tracking, but it is not so easily classified and is highly dependent on the situation of the experiment [5]. It is not only dependent on how are the question asked, but also on the situation that the subject is put in.

We will be collecting mentioned implicit feedback from users, while they will be filling out online questionnaires, like big five or others. These questionnaires will be setup according to available research, so that the external factors will affect the collected data as little as possible.

Collecting implicit measures mentioned sooner we can accumulate data from users. These data than can be used as input to our method, that will try to classify it and determine if user is trying to be deceptive.

We will also try to classify the effectiveness of individual measures, so that they can be used separately if needed.

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