Biometric Emotional Analytics

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Background

No aspect of our mental life is more important to the quality and meaning of our existence than emotions" (Sousa, 2010). It is not surprising that emotions have been a point of interest for researchers for centuries (Sousa, 2010), however, even after considerable research effort over many years, there is no definitive answer to the question 'What is an emotion?' (Scherer, 2005). As computer programs and application become more complex User experience and the ability to interact successfully has become crucial, and as such the Human Computer Interaction (HCI) becomes critical to that success. One increasingly important aspect of HCI is the role played by the user's emotional state on such interactions. But as emotions are difficult at best to define, the goal is to identify a method by which they can be analysed and predicted thus enabling a possible improvement to interface interactions, and user experience. Biometric analysis offers one solution to this complex situation. Although there are many techniques utilized in biometric analysis it is imperative that whichever method is employed has the minimum effect without causing distress or interruption to the user's interaction.

Such a system has been developed utilising Digital Physiognomy (Face Reading) software and a wireless GSR device to correlate the emotions measured. A simple algorithm is used to deliver a probability factor (PF) of the measured emotion and a methodology has been postulated.

Research to validate the methodology as well as to further enhance the methodology with the addition of other suitable biometrics is necessary and is the subject of this PhD.