xAffect - A Modular Framework for Online Affect Recognition and Biofeedback Applications

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Abstract:

Providing information about the affective state of a person is getting more and more important in a wide range of learning applications. For instance biofeedback can be used to reduce stress level or increase the performance of a person during a learning task. The development of wearable physiological sensors drives the development of applications that provide online biofeedback using sensor data for online analysis. In this paper we present a Java software framework called xAffect for complex online biofeedback systems that can be used as a rapid prototyping middleware between physiological sensors and third party software. We designed xAffect for financial decision making support, but due to its easy extensibility it is a useful framework for several other affective computing applications. Biomedical engineers and computer scientists are invited to use xAffect and extend it according to their requirements.