ARDUINO HEART RATE AND SKIN TEMPERATURE BASED WIRELESS EMOTION DETECTOR

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Abstract

Arduino is an up-and-rising technology that takes part in trying to make hardware development not only for those engineers but even for people who are interested with hardware projects. Also that wireless communication has become popular due to the ease of accessing data and sending data without having to be in a certain fix area. With the presence of open-source Arduino and wireless communication devices, there have been quite a number of popular new projects created based on it. The Arduino together with other module suitable for any microcontroller has made a simple board to do something great. This has grabbed the author attention of trying to increase her knowledge by experimenting on one of the today's technology. She proposed on creating a wireless emotion detector where the result will later on be useful for future used in order to demonstrate the use of Arduino UNO, wireless communication device (XBee) and sensors (Pulse sensor and temperature sensor). The detector is built successfully according to the proposed method by referring to many medical research and feedback on existing Arduino developers. The algorithm used for accuracy calculation and emotion detector are based on research projects of others and well-known organization. Through all those research, the authors conclude that accuracy is quite a problem on using small sensors for providing bio-sensing feedback which is in the author case is the heart rate and skin temperature, but can be adjust by doing some calculation adjustment.

Key words

Arduino, Wireless Communication, XBee, Pulse sensor, Temperature sensor,

Bio-sensing, Heart rate, Skin temperature