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Stress recognition using photoplethysmogram signal (Article)

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Abstract

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This study proposed a novel method of stress recognition using photopletysmogram (PPG) signal. PPG devices are now widely used because it is convenient, low powered, cheap and also easy to handle due to its small size. A total of 5 subjects were involved in this study. The PPG signals were taken in resting condition using pulse oximetry. The subject then goes through a stressor test in order to record the physiological changes. The data were collected before and after the test was conducted and later extracted. These samples were then categorised using classification techniques to differentiate between normal and stress condition. Based on the experimentation results, the systolic peak value differences of normal and stress conditions are evident. Therefore, the outcome of this study suggest the reliability of implementing PPG signal for stress recognition.

Author keywords

Photoplethysmogram (PPG) Pulse oximetry Stress Stroop Systolic peak

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