

UNIVERSITY OF SOUTH FLORIDA

Major Research Area Paper Presentation

Machine-based Infant Pain Assessment

by

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For the Ph.D. degree in Computer Science & Engineering

The current practice of assessing infants' pain depends on using subjective tools that fail to meet rigorous psychometric standards and requires continuous monitoring by health professionals. Therefore, pain may be misinterpreted or totally missed leading to misdiagnosis and over/under treatment. To address these shortcomings, the current practice can be augmented with a machine-based assessment tool that monitors various pain cues and provides a consistent and minimally-biased evaluation of pain. This paper reviews existing machine-based methods to assess infants' pain, proposes the development of a multimodal pain assessment tool (MPAT), and presents preliminary implementation results.

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