

# UNIVERSITY OF SOUTH FLORIDA

*Defense of a Master's Thesis*

Recognizing Emotions with Physiological Signals Using 1D CNN-LSTM Neural Network

by

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For the M.S. Degree in Computer Science & Engineering

Emotions are complex in nature as a combination of human behavior, thinking and it has been found out that modal techniques recognize emotions with more reliability. The aim of this thesis is to recognize and classify emotions into high/low arousal and high/low valence using modal physiological signals and 1D CNN-LSTM neural model. Furthermore, differences in emotional brain activity across four brain lobes and two brain hemispheres are also investigated. Results show that proposed model achieves a high accuracy and significantly outperforms state of the art studies.

*Wednesday, March 11<sup>th</sup>, 2020*

*11:00 AM*