

# UNIVERSITY OF SOUTH FLORIDA

## *Defense of a Master's Thesis*

*Recognizing Emotions with Physiological Signals Using 1D Convolutional LSTM Neural Network*

by

*Rupal Agarwal*

*For the MSCS degree in Computer Science & Engineering*

*Emotions are complex in nature as they are a combination of human behavior, thinking and feeling and it has been found out that multi-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 multi-modal physiological signals and 1D CNN-LSTM neural model. Furthermore, differences in emotional brain activity across four brain lobes and two brain hemispheres is also investigated. Results show that the proposed model achieves a high accuracy and significantly outperforms the current state of the art studies.*

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

*11:00 AM*

*ENB 313*

THE PUBLIC IS INVITED

Examining Committee

Marvin Andujar, Ph.D., Major Professor

Shaun Canavan, Ph.D.

Paul A. Rosen, Ph.D.

*Robert Bishop, Ph.D.*  
*Dean, College of Engineering*

*Dwayne Smith, Ph.D.*  
*Dean, Office of Graduate Studies*

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