INFORMATICS INSTITUTE OF TECHNOLOGY

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In Collaboration with

UNIVERSITY OF WESTMINSTER (UOW)

EMOPIC

Emotion Based Photo Organizer

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Submitted in partial fulfilment of the requirements for the

BEng (Hons) Software Engineering Degree

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April 2016

ABSTRACT

Automated Emotion Extraction has always been an interesting research area. Now with the advent of selfies (A form of frontal facial image based photography) and a mainstream interest in organizing countless amount of pictures people take with the devices they own, the practical applications of such heavily research based topics are increasing. In the light of this, this project aims to build an efficient emotion extraction module which would target to classify the photos taken based on the six basic expressions stated by Ekman and Friesen namely happiness, sadness, anger, surprise, disgust, fear along with neutral and categorize them under their respective groups. To demonstrate this module an Intelligent Digital Photo Organizer will be built incorporating the above module which will organize the photos imported to the application under above mentioned categories. The emotion extraction module will be made in such a way that it could be seamlessly incorporated for other similar purposes as well. Through an in-depth literature study, the system proposes two novel ways of solving the above problem one with a traditional approach and the other with a deep learning approach, latter achieving an average accuracy of 76.88 %.

Subject Descriptors:

I.4: IMAGE PROCESSING AND COMPUTER VISION

Face Detection

Emotion Extraction

Deep Learning

Keywords:

Computer Vision, Deep Learning, Convolutional Neural Network, Emotion Extraction