



FACE EMOTION DETECTION FOR CUSTOMER RELATIONSHIP MANAGEMENT

M. JYOTHIRMAI, V. SUPRIYA and P. PRAVALLIKA

Department of Computer Science and Engineering
Pragati Engineering College
Surampalem, E.G. Dt., A.P., India
E-mail: jyothimusini1881@gmail.com
pravallikareddypokuri@gmail.com
supriyavobblisetty1999@gmail.com

Abstract

In the current scenario, the emotion intelligence is widely attracted by the researchers. The emotion intelligence will play a vital role in establishing the customer relationship and bonding between the people. The present paper proposes a novel face emotion detection system (NFEDS) for customer relationship management. The proposed algorithm uses Tensor flow for the development. The proposed NFEDS is applied to various emotions and the algorithm is efficiently recognizes various emotions like neutral, surprise, anger and happy etc.

I. Introduction

The Convolutional Neural Network [1] is found to be popular for emotion recognition. They are used for estimating the instantaneous emergency emotions. The KNN and Hybrid PRNN algorithms [2] are used for emotion recognition system with speech. The extreme sparse learning [3] is designed to recognize the emotions based on the non linear classification model. The feature sets [4] are used for recognition of emotions and multistage classification. It uses Sequential forward selection (SFS) technique. The ensemble methods [5] are used to capture the audio and spatial information from the input. The industry level face recognition networks [6] are used for emotion recognition. The KNN and Deep Neural Networks [7] are used for

2010 Mathematics Subject Classification: 94A13.

Keywords: Convolution Neural Network; Recurrent Neural Network; Graphical Processing Unit; Tensor flow; Local Binary Pattern.

Received October 10, 2020; Accepted November 2, 2020

the recognition of emotion [8, 9, 10]. These systems are well suited for health care systems. The present paper is organized into four sections. The introduction is discussed in section-I, methodology is discussed in section-II, results and discussions in section-III and conclusions in section-IV.

II. Methodology

The present paper proposes a novel face emotion detection system (NFEDS) for customer relationship management. The present NFEDS algorithm is using the Tens for flow for the development of the algorithm as shown in Figure 1. An easy way to comply with the conference paper formatting requirements is to use this document as a template and simply type your text into it.

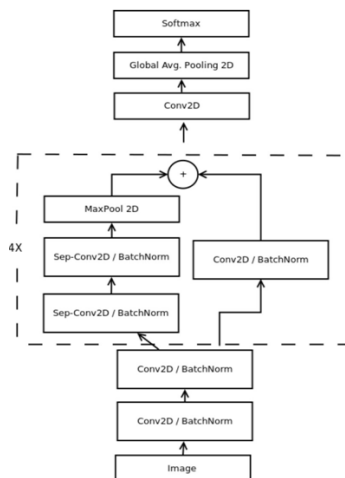


Figure 1. Flow Chart of NFEDS algorithm.

III. Results and Discussions

The proposed NFEDS algorithm is applied on various inputs with different emotions as shown in Figure 2 to 5. The results clearly indicate that the proposed algorithm has successfully recognized Neutral, Surprise, Anger and Happy emotions.

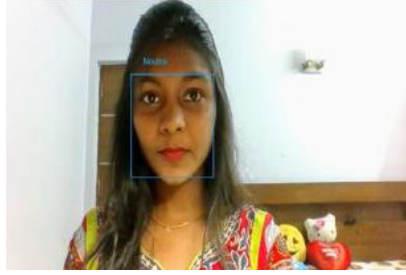


Figure 2. Result of NFEDS algorithm for Neutral Emotion.



Figure 3. Result of NFEDS algorithm for Surprise Emotion.



Figure 4. Result of NFEDS algorithm for Anger Emotion.

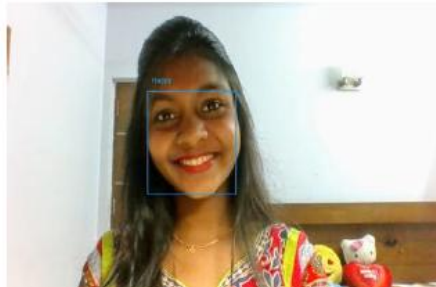


Figure 5. Result of NFEDS algorithm for Happy Emotion.

IV. Conclusions

The present paper focuses on the development of emotion recognition system. This type of systems are required for establishing the customer relationship in the market. So, the present paper is proposing a novel face emotion detection system (NFEDS) for customer relationship management. The proposed algorithm uses Tensorflow for the development. The proposed NFEDS is applied to various emotions and the algorithm is efficiently recognizes various emotions like neutral, surprise, anger and happy etc.. 3

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