An Iterative Search based Technique to Find or Predict Older Face Images of a Child

Volume 151

Number 6

Year of Publication: 2016

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Abstract

The major variations in the appearance of human faces is because of age changes. Due to many lifestyle issues, it is difficult to precisely predict how individuals may look in older years. This work aims to develop a technique for predicting older face images from a given childrens face image. This method requires only one input face image of a child and produces different age progressed images of the child at different target ages. This technique might be very helpful to find the missing children. In this method we have proposed a technique to find or construct a synthesize older face images from a given face image dataset. In the proposed work the FG-NET image dataset has been classified with different age groups of face images. Age groups are named by AgeGroup IDs 10-14, 15-19, . . . , 50-54. For a given child image we have applied an iterative approach to find the face images in higher age groups. At the first step an input of a child image of age that is below of the first age group has been taken and searched that image in the face dataset of higher age group. If the face is found, then the founded image is considered as the target image at that age group and that new face is searched in the next higher aged group data set. If it is not found, then a synthesized mean image is constructed with
the input image and the founded nearest image. The same technique is repeated until the
construction of the oldest (of age 50-60) synthesized image computation is completed. Here
age group 50-60 has been considered as the oldest image in the experiment. In this way the
older images of all the respective age groups can be found. Here PCA face recognition
algorithm is used for searching an image from a given dataset.

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Index Terms

Computer Science

Image Processing

Keywords

Synthesize Image, Age Progression, Future Image Prediction, Face Image Modeling, Missing Children