Face Aging Simulation

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Abstract

Face aging is one of the most challenging task in image processing and is commonly used in many areas. This paper consists of compositional method which will represent faces of different age groups. The representation of faces in different age group is done hierarchically i.e. using And-Or graph, in which the And nodes will decompose the face into different components (e.g. wrinkle, hair) for crucial age perception and the Or node will represent the diversities of faces. The graph is then represented using Markov chain.

The diversities or the uncertainties of the faces are learnt from the large database which consists of large number of images. There are two criteria for evaluating the result the aging simulation and one of them is the accuracy of the simulation i.e. whether the perceived image belongs to a particular age group, and second is the preservation of the identity i.e. whether the face, that is retrieved after simulation process is preserving the identity of the person or not. The statistical analysis of these two above mentioned criteria will decide the performance of the
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aging simulation.

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Index Terms

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Keywords

And-Or Graph, Aging modeling, ANOVA.