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
aging simulation.

References

1. Wei Shen, Zhenjiang Miao “Face Aging Simulation Based On Image Warping”
3. Junyan Wang, Yan Shang, Guangda Su, Xinggang Lin “Age simulation for face recognition”
4. Jinli Suo, Song-Chun Zhu, Shiguang Shan and Xilin Chen “A Compositional and Dynamic Model for Face Aging”
5. Jinli Suo, Song-Chun Zhu, Shiguang Shan and Xilin Chen “A Multi-Resolution Dynamic Model for Face Aging Simulation”
6. Junyan Wang, Yan Shang, Guangda Su, Xinggang Lin “Age simulation for face recognition”
Index Terms

Computer Science

Pattern Recognition

Keywords

And-Or Graph, Aging modeling, ANOVA.