

Abstract

Face aging is still challenging because of the lack of facial image data for the same person at different ages (paired dataset) and poor data quality. Facial images are often used as biometric identities. But as humans age, the face can change due to several factors such as the environment and lifestyle. Currently, computers have not been able to see the similarity of facial images of the same person at different ages because of the effects of aging on the face. So that the prediction of facial aging is needed to help improve face recognition and verification, especially for facial images that have been around for years. To overcome the shortage of paired datasets that are difficult to collect, the CycleGAN method can produce realistic images with better resolution without using paired datasets in recent years. So this study proposes the CycleGAN method to create a system that can predict facial aging. From the experiments carried out, the system can produce a Frechet Inception Distance (FID) value of 2.24 and a *Mean Opinion Score* (MOS) of 3.38.

Keywords: cycleGAN, generative adversarial network, image, face