

A review of facial caricature generator

Abstract:

Caricature is a pictorial description of a person or subject in a summarizing way using exaggeration of the most distinguish features and oversimplification of the common features in order to make that subject 'unique' and to preserve the recognizable likeness of the subject. Facial caricature generator is developed to assist the user in producing facial caricature automatically or semi-automatically. It is derived from the rapid advance in computer graphics and computer vision as well as introduced as a part of non-photorealistic rendering technologies. Recently, facial caricature generator becomes particularly interesting research topic due to the advantageous features of privacy, security, simplification, amusement and their rampant emergent realworld application such as in magazine, digital entertainment, Internet and mobile application. This paper reviews the uses of caricature in variety of applications, theories and rules in the art of drawing caricature, how these theories are simulated in the development of caricature generation system and the current research trend in this field. There are two main categories of facial caricature generator based on their input data type: human centered approach and image centered approach. It also briefly explains the general process of generating caricature. The state of the art techniques in generating caricature are described in detail by classifying it into four approaches: interactive, regularity-based, learning-based and predefined database of caricature illustration. Expressive caricature is also introduced which is evolved from the neutral caricature. This paper also discusses relevant issues, problems and several promising directions for future research.