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Canny Edge Based Image and Video Cartoonization

Kiran Kumar P N[1], Kalle Amrutha[2], Madanapu Yamuna[3], Tumpiri Sai Prasuna[4], Machireddygari Gayathri[5]
Assistant Professor, Dept.of CSE[1]
Engineering Students, Dept. of CSE[2,3,4,5]
SJC Institute of Technology, Chikkaballapur, India

Abstract: *Canny edge-based image and video cartoonization is a technique that transforms real-life images and videos into their cartoonified versions. This process emphasizes clear edges, smooth colors, and simplified textures, making it an excellent tool for creating artistic and creative content. To enhance the cartoonifying effect, we use image processing techniques that involve four main steps: noise reduction, edge detection, clustering, and erosion. By applying algorithms such as Canny edge detection and k-means clustering, we can achieve sharp edges and reduce the number of colors used in the image. To transform a video into its cartoonified version, we first convert it into frames of images, then process each frame using the same techniques, and finally combine the processed frames to create a cartoonified video. Overall, this approach provides a unique and artistic perspective on the original image and video content.*

Keywords: Canny Edge Detection, Image Processing, Noise reduction, Detecting edges, Clustering, Eroding, K Means Clustering, Smooth colors.

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