

OpenCV Powered Storytelling to Turn Kids into Cartoon Heroes

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Abstract: *Real-world image cartooning has developed into a potent fusion of technology, art, and narrative. This article examines the potential of OpenCV, a powerful, open-source computer vision library, to enhance digital storytelling and educational experiences by turning child photos into cartoon-like characters. We classify and compare techniques ranging from traditional image processing methods like edge detection, bilateral filtering, and colour quantisation to more sophisticated solutions involving Generative Adversarial Networks (GANs) like CartoonGAN by examining important methodologies from recent literature. We examine the ways in which these technologies are used to extract and improve visual characteristics that are crucial for stylised image alteration, especially in applications that are geared towards children. In dynamic contexts like instructional games, animated content production, and mobile storytelling apps, particular attention is paid to usability, performance, and aesthetic appeal. The study ends by outlining potential options, such as real-time cartoonification, enhanced facial feature retention, and the incorporation of emotion-based style transfer, while also pointing out the drawbacks of existing methods, such as resolution loss and susceptibility to complicated backgrounds. The goal of this review is to close the gap between technical image processing technologies and their innovative, playful uses in children's digital storytelling..*

Keywords: OpenCV

