

Selective Image Object Colorization

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Abstract

This paper addresses the problem of automatically finding and colorizing a probable color of a selected object from an image, given a gray - scale picture as input. Because this problem is clearly limited, existing methods have either depended on user interaction to select color and colorize the image or have relied on learning algorithms to colorize the image.

For the solution, the author used interactive image segmentation to segment the image object and then used the extracted object mask to colorize it. To minimize the user's interaction, automatic colorization is used to colorize the object.

Testing was carried out on both functional and non-functional requirements, with positive results. The solution was evaluated on a technical level by domain experts in the image editing industry, as well as machine learning experts. People who do not know how to edit images have been designated as end users. The evaluation feedback assisted in identifying issues from the users' perspective and further improving the system.