Isolator: Selective Background Removal using Interactive Image Segmentation

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Abstract

Background Removal is the process by which the subject of an image is identified and the background around it is removed. It is used in many real-world applications including image editing software and background removal of medical images. However, most background removal projects provide automatic background removal with accurate results. Some manual background removal techniques are available, but they have proven to be either less accurate or takes more time to get a segmented image.

The aim of this project is to create a system that can perform background removal tasks with minimal user interactions performed. It uses a point click interactive segmentation system which has been refined to get better results. These results are achieved using segmentation models and gives highly accurate results. The background is removed using minimal clicks and the output image can also be refined more if required.

The proposed system Isolator performs very well in terms of background removal and segmentation. The system performs extremely well and segments images using less clicks. The system has then been compared with other systems in and it has been found out that it performs better and takes less time than other systems that are available.

Keywords: Background Removal, Point Clicks, Interactive Segmentation, Deep Learning, Computer Vision