EE621 Mini Project Report

Title - **Object Background Removal**

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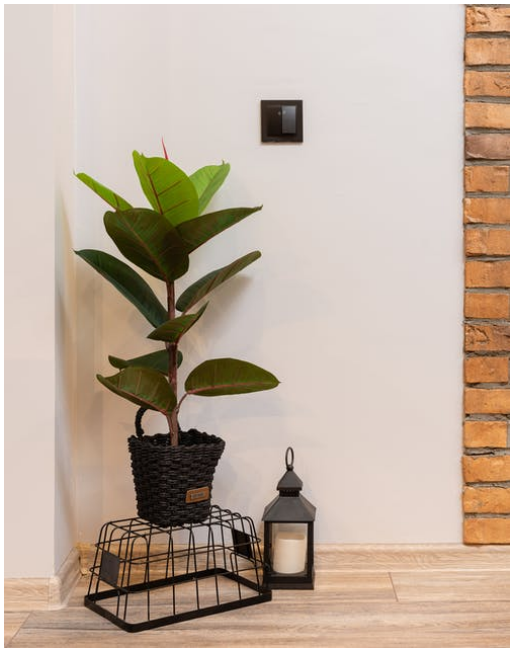
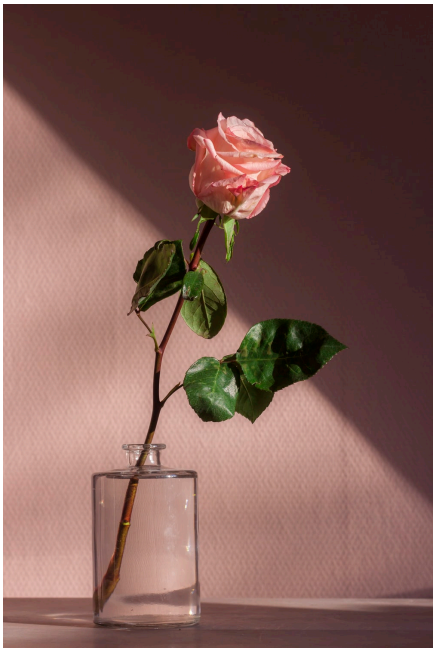
Objective:

In this project we created a series of filters that serves to remove background from still objects without loss of image resolution. The script not only processes a single file, but can also process all images from the input folder and save them in the output folder with the same name.

Input Image Description:

Our model takes still objects image (preferably with light background and non-glossy) as input. A couple of sample images are attached below:





Process for implementation:

- Firstly, we grayed the image and then applied canny edge detection, erosion and dilation.
- The next step is to find the contours and fill all the contours.
- Then we blurred the mask after smoothing it to make the contours smooth.
- We then converted the mask into 3-channel and blended it with foreground.
- After this, we added transparency channel to the image to make background transparent.
- Lastly, saved the image in png format.

Results:

The outputs which we got for the above two images are shown below:

As we can observe that the shadows plus the background is removed successfully with no loss in image quality or resolution.

Limitations:

As our project is completely based on filters, it suffers when the object is glossy or the background matches with the object colour.