Multi-view Image Fusion, Supplementary Results

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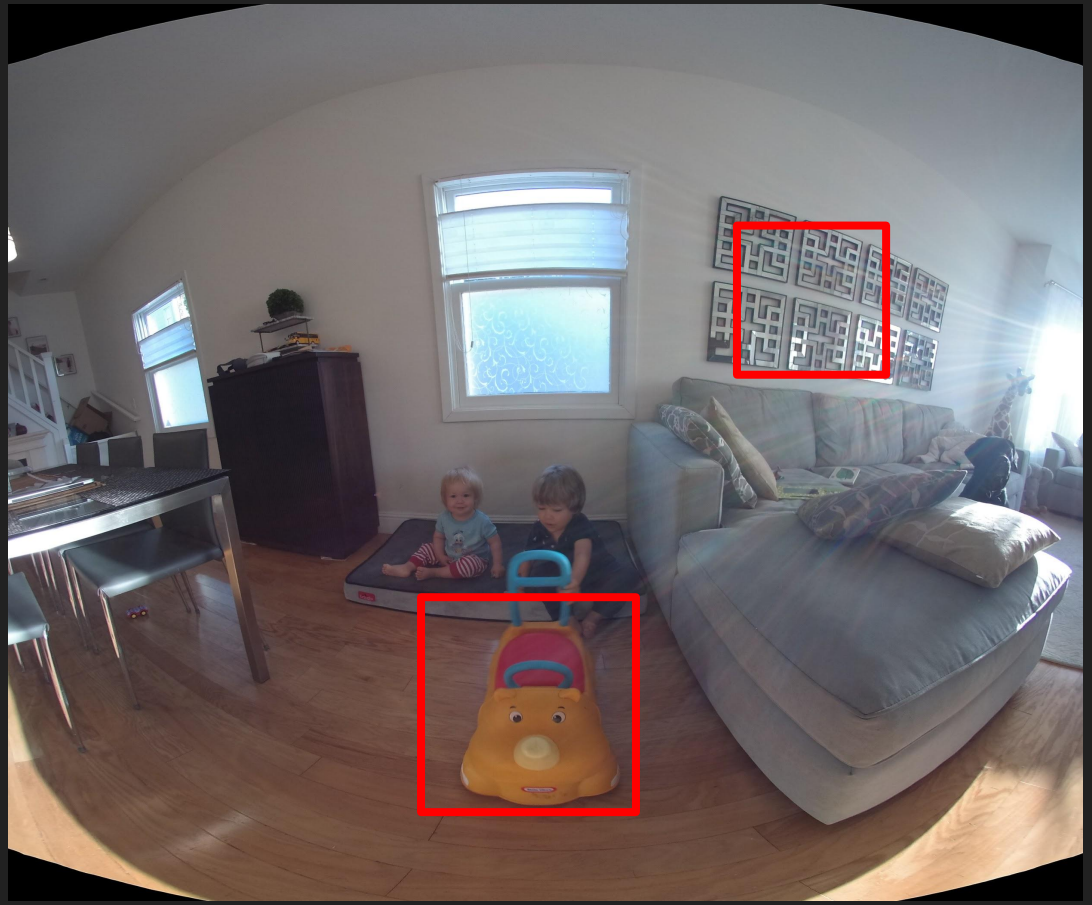
ICCV 2019

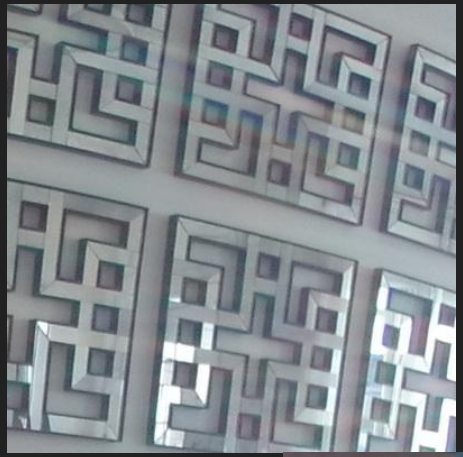
Tips for viewing the content

- Best viewed in full-screen mode
- Use page-down/up keys to jump from slide to slide

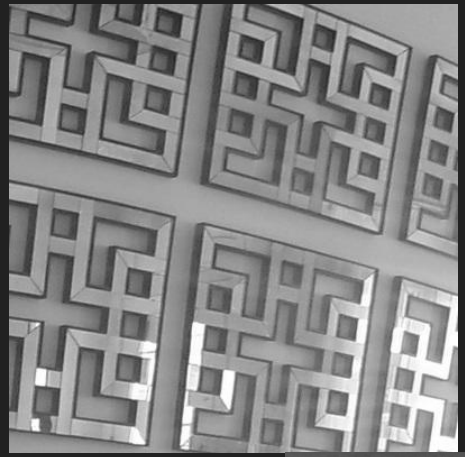
Color Transfer

Color transfer, source view

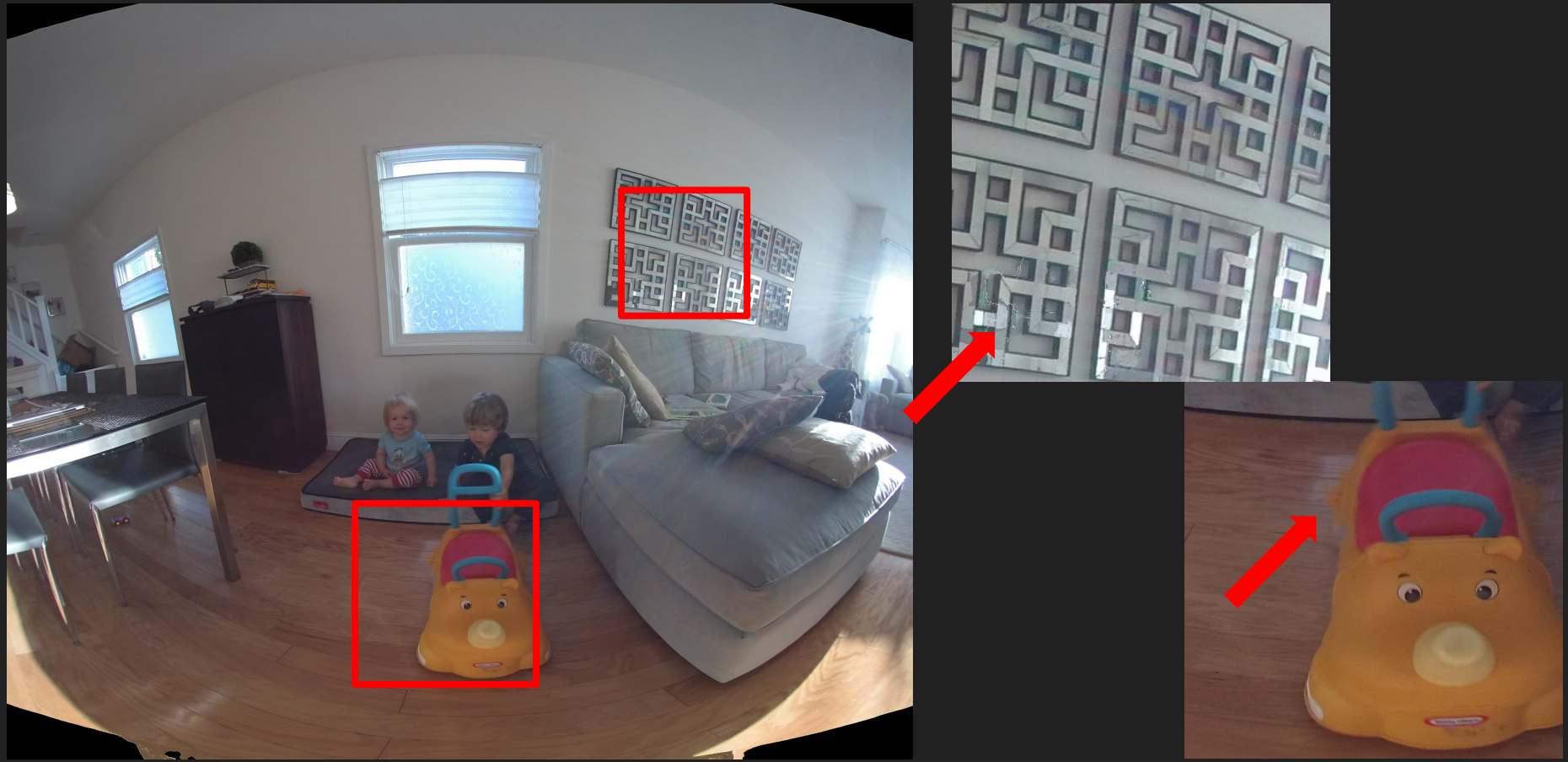




Color transfer, target view



Color transfer, warp-only



Color transfer, U-net

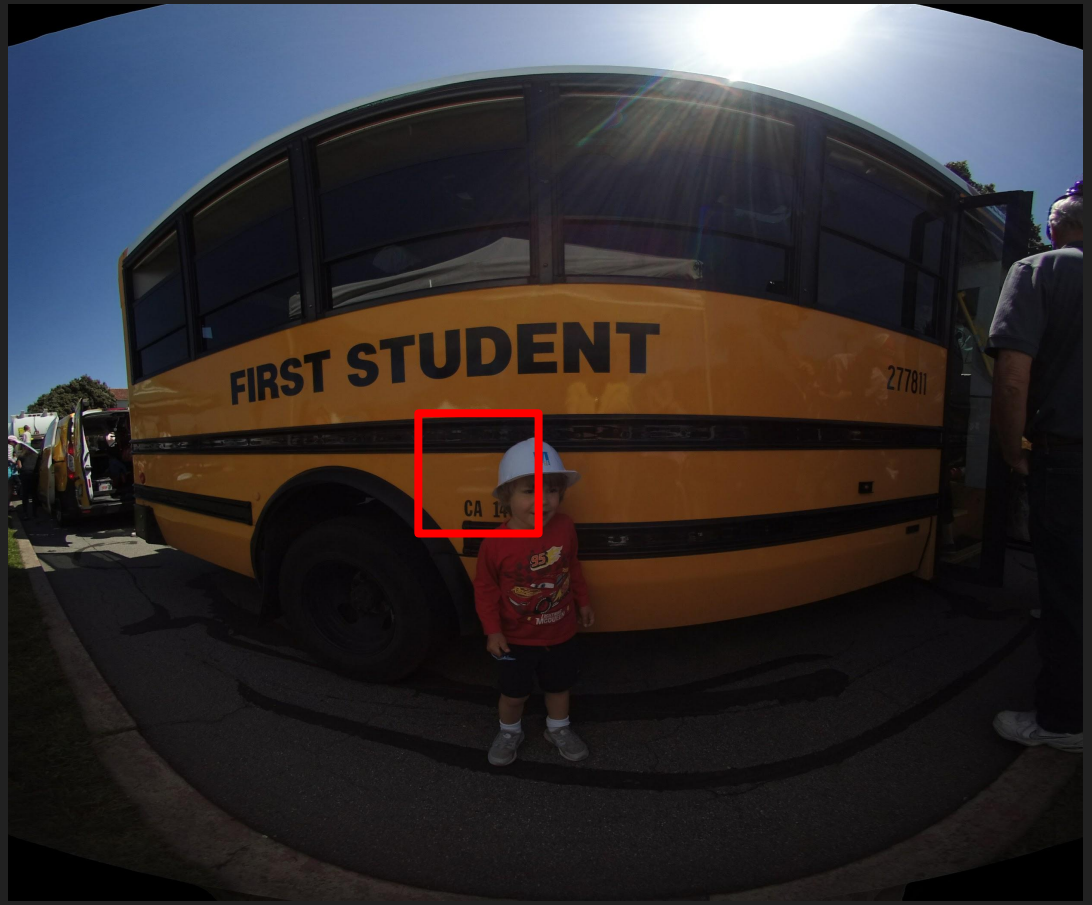
Color transfer, our result

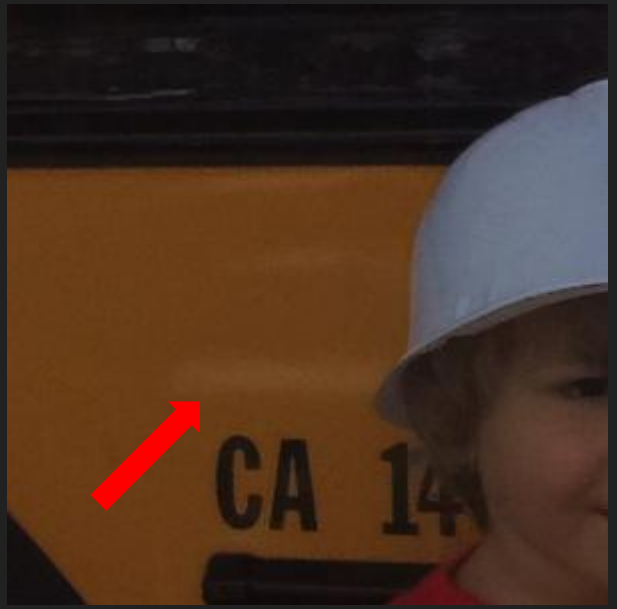
Color transfer, ground truth

Color transfer, source view

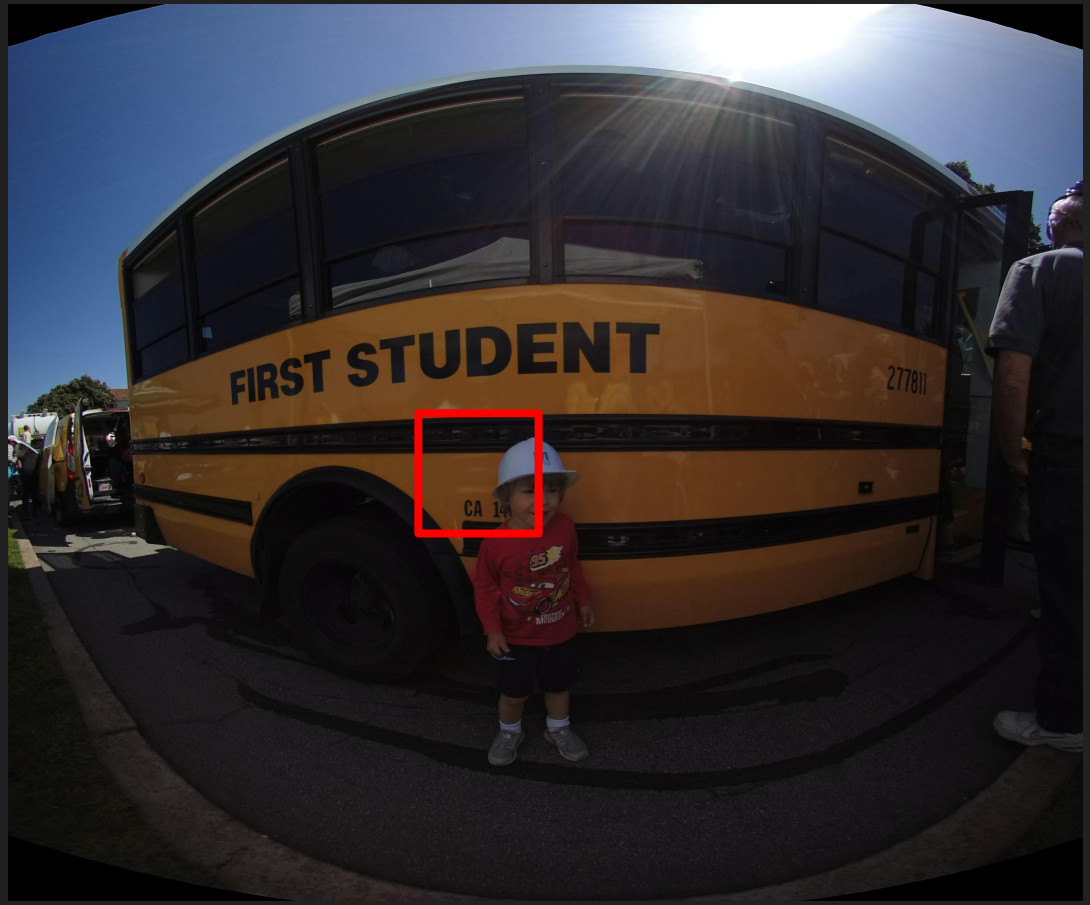
Color transfer, target view

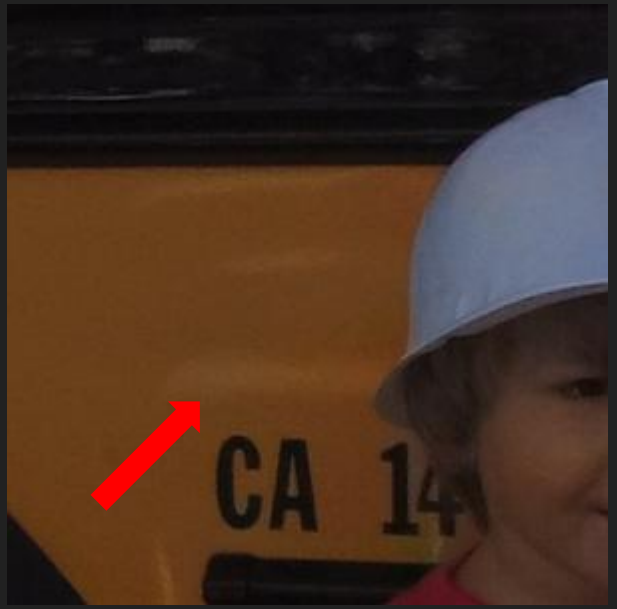
Color transfer, warp only



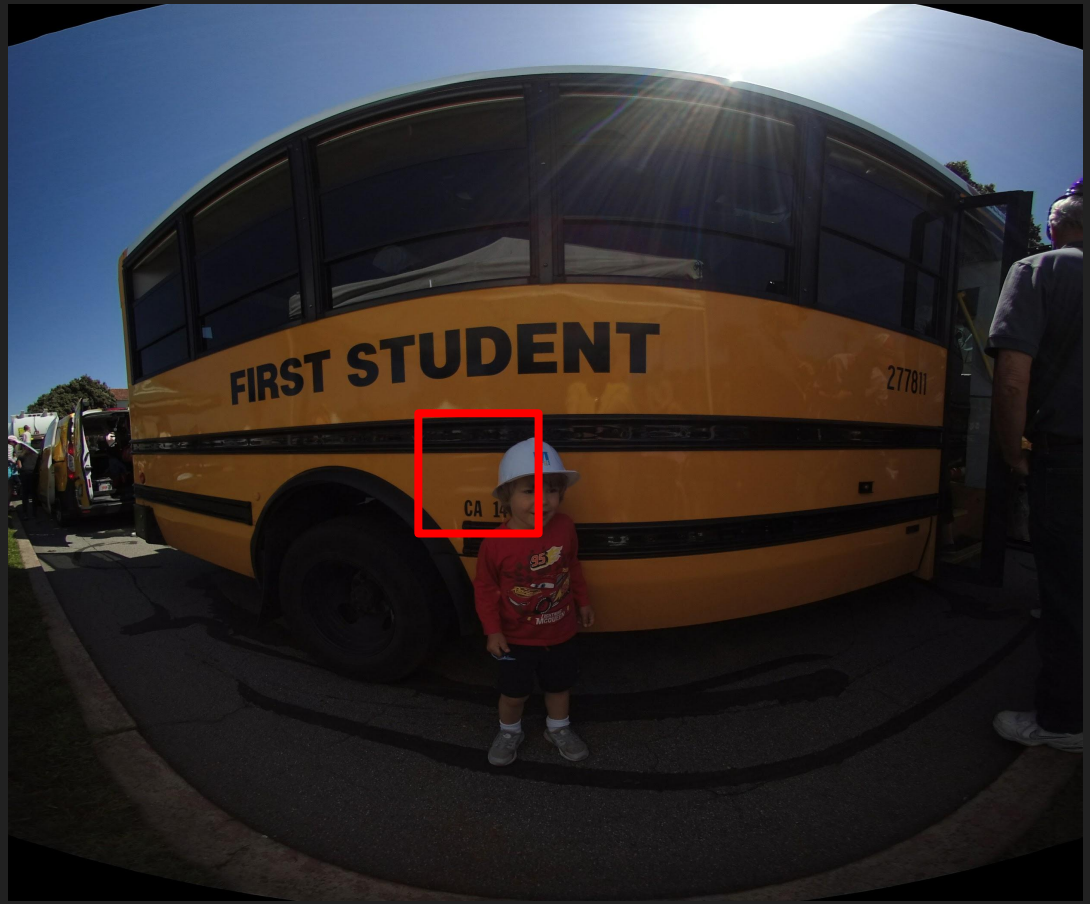


Color transfer, U-net

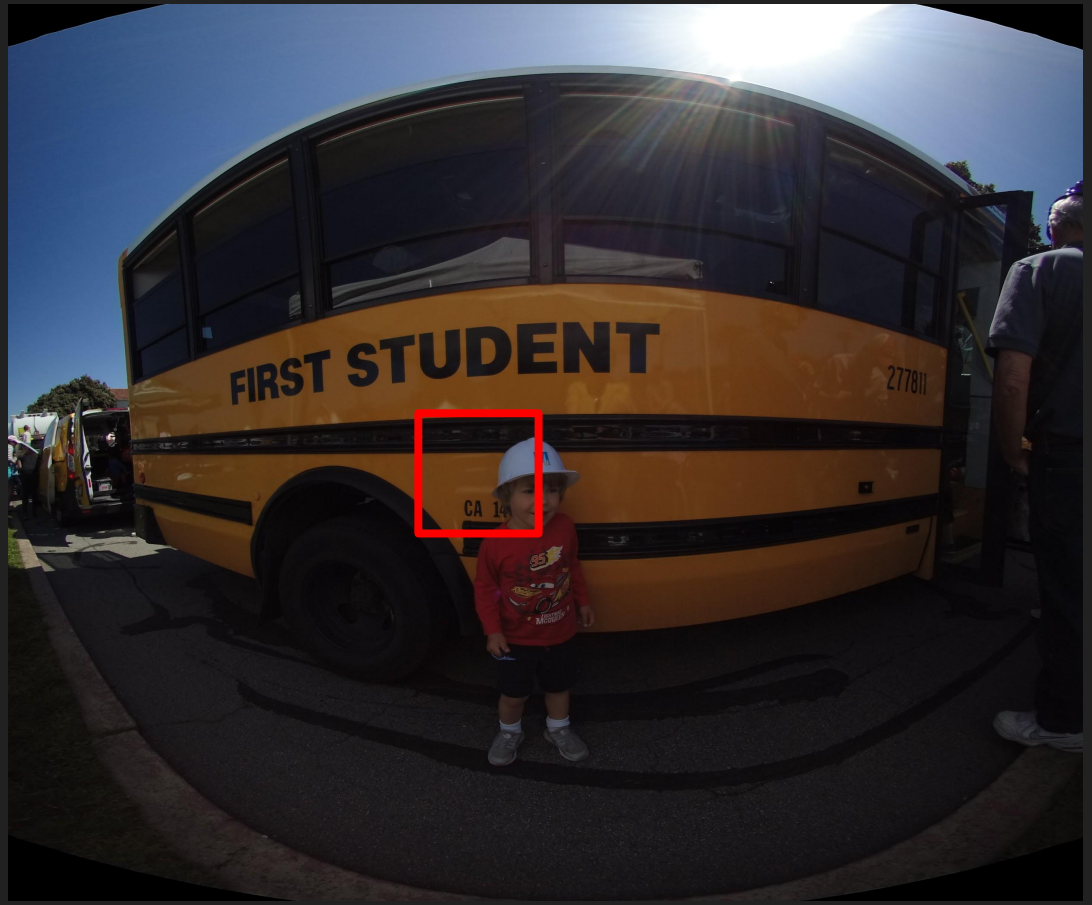




Color transfer, our result



Color transfer, ground truth



Color transfer, source view

Color transfer, target view

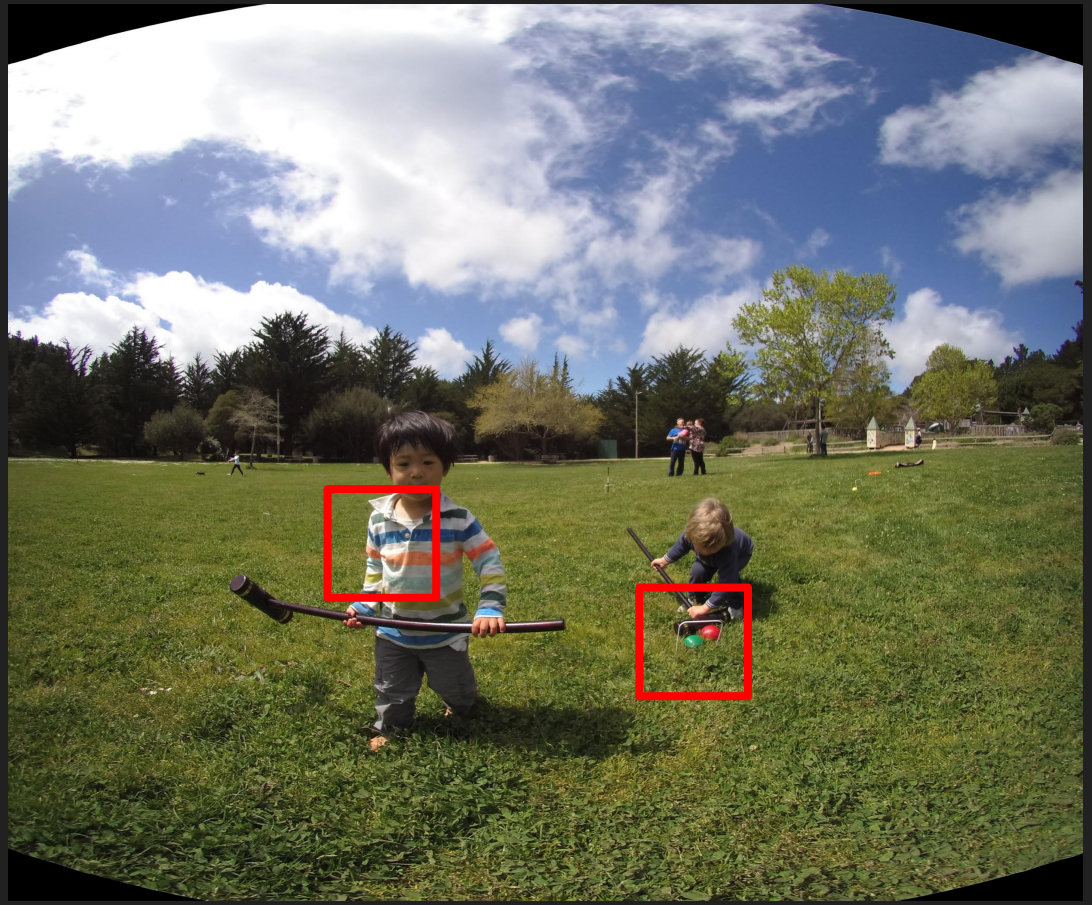
Color transfer, warp only

Color transfer, U-net

Color transfer, our result

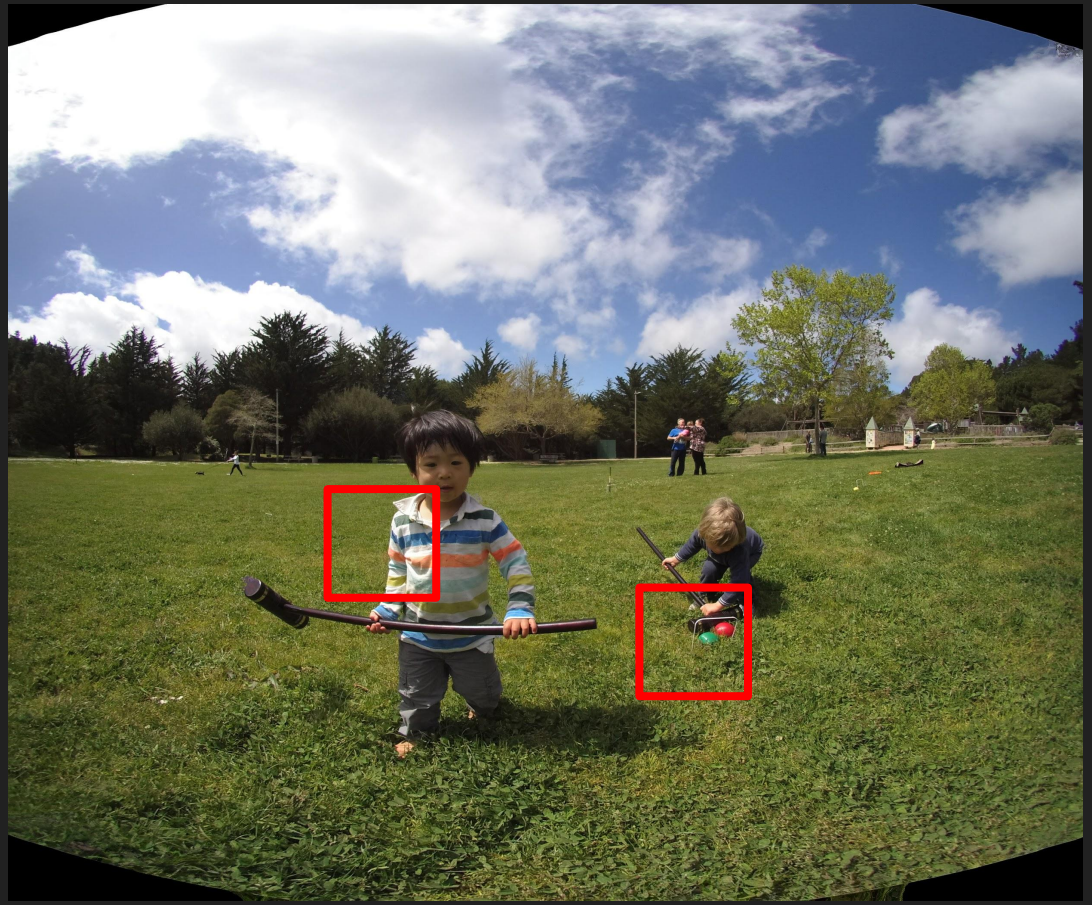
Color transfer, ground truth

Color transfer, source view

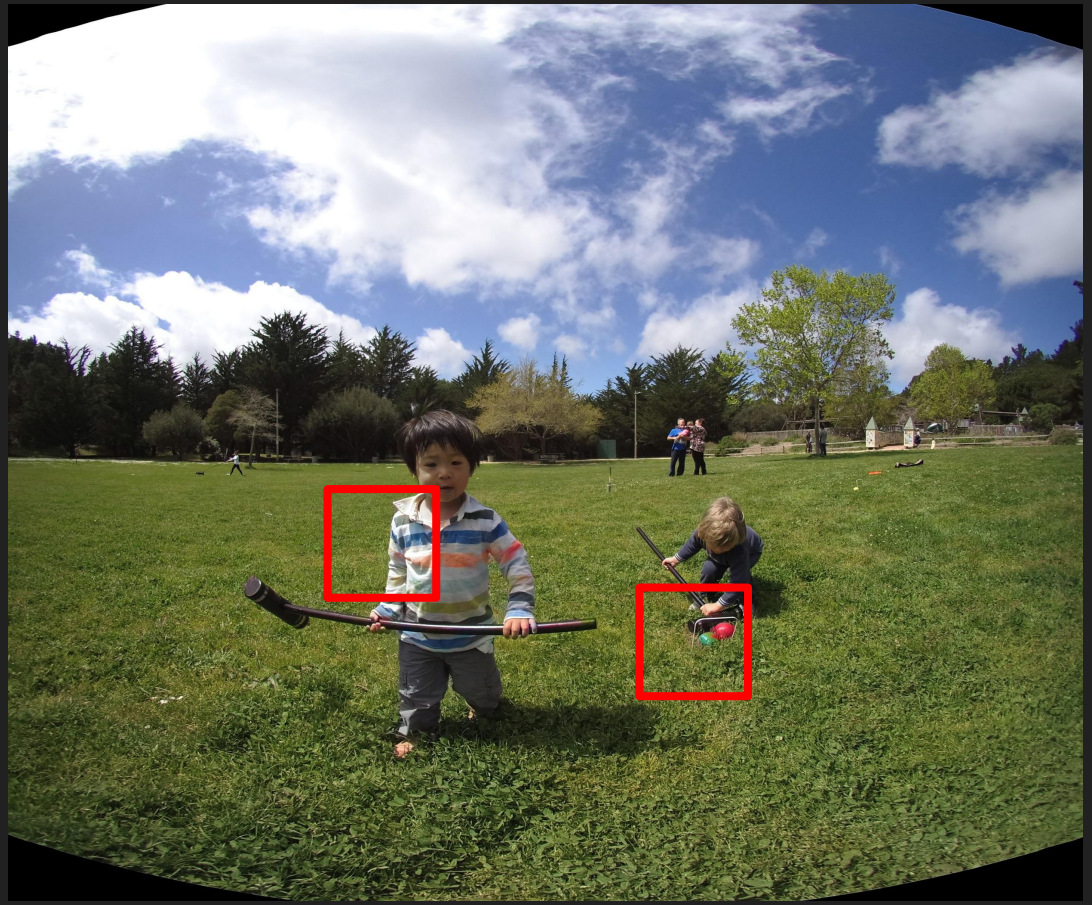


Color transfer, target view

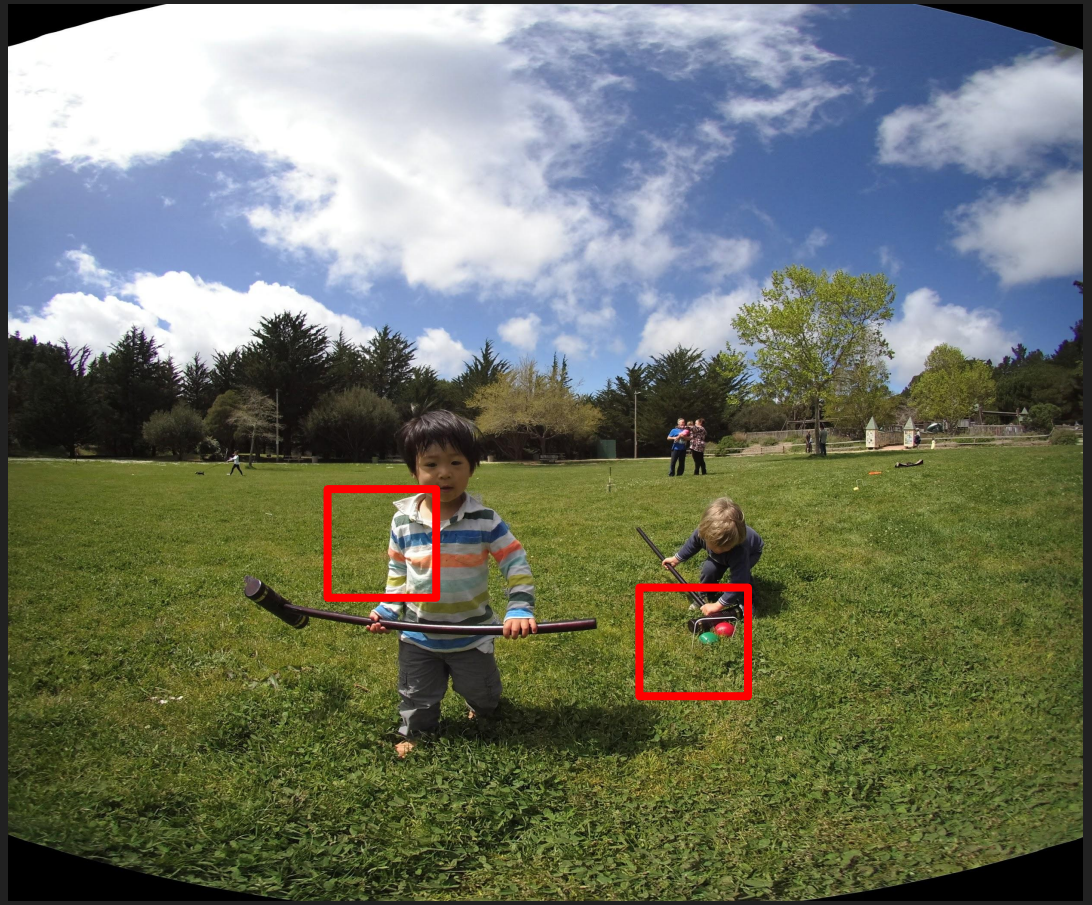
Color transfer, warp only



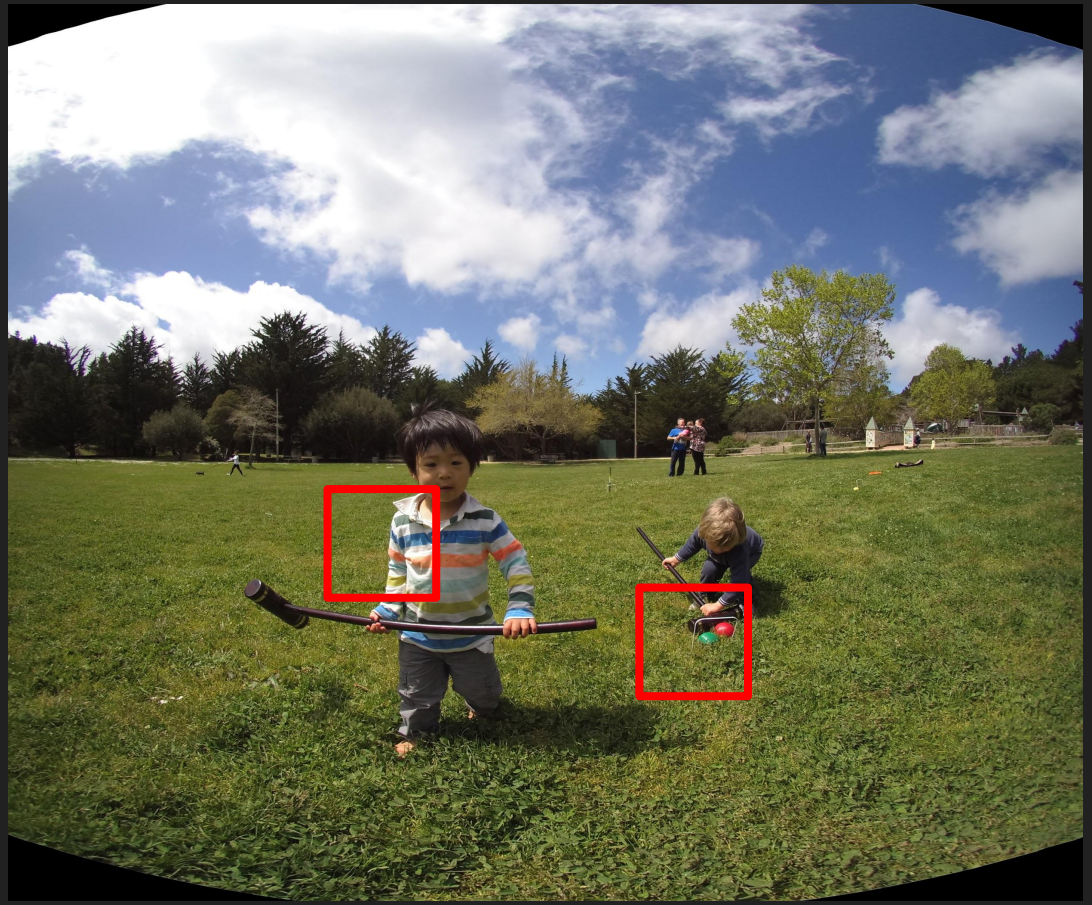
Color transfer, U-net



Color transfer, our result



Color transfer, ground truth



Color transfer, source view

Color transfer, target view

Color transfer, warp only

Color transfer, U-net

Color transfer, our result

Note the robustness to reflections

Color transfer, ground truth

Color transfer, source view

Color transfer, target view

Color transfer, warp only

Color transfer, U-net

Color transfer, our result

Color transfer, ground truth

Color transfer, source view

Color transfer, target view

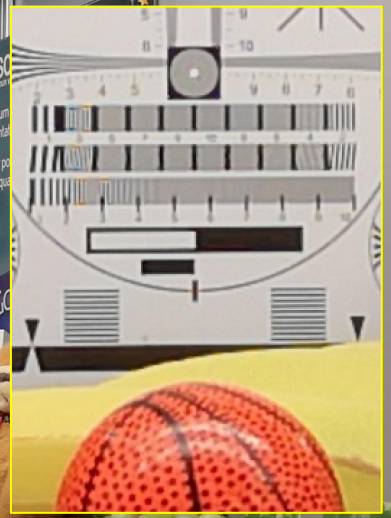
Color transfer, warp only

Color transfer, U-net

Color transfer, our result

Color transfer, ground truth

Color transfer (Huawei P20 Pro), source view

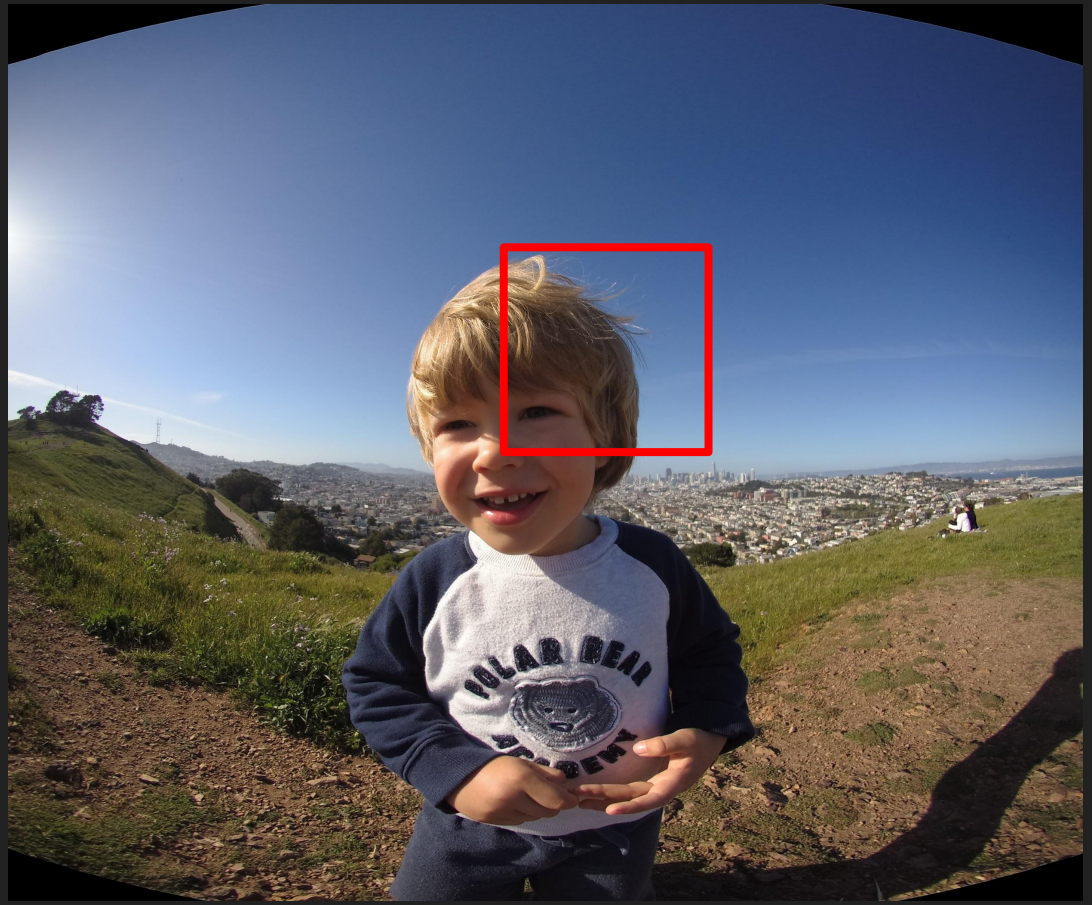


Color transfer (Huawei P20 Pro), target view

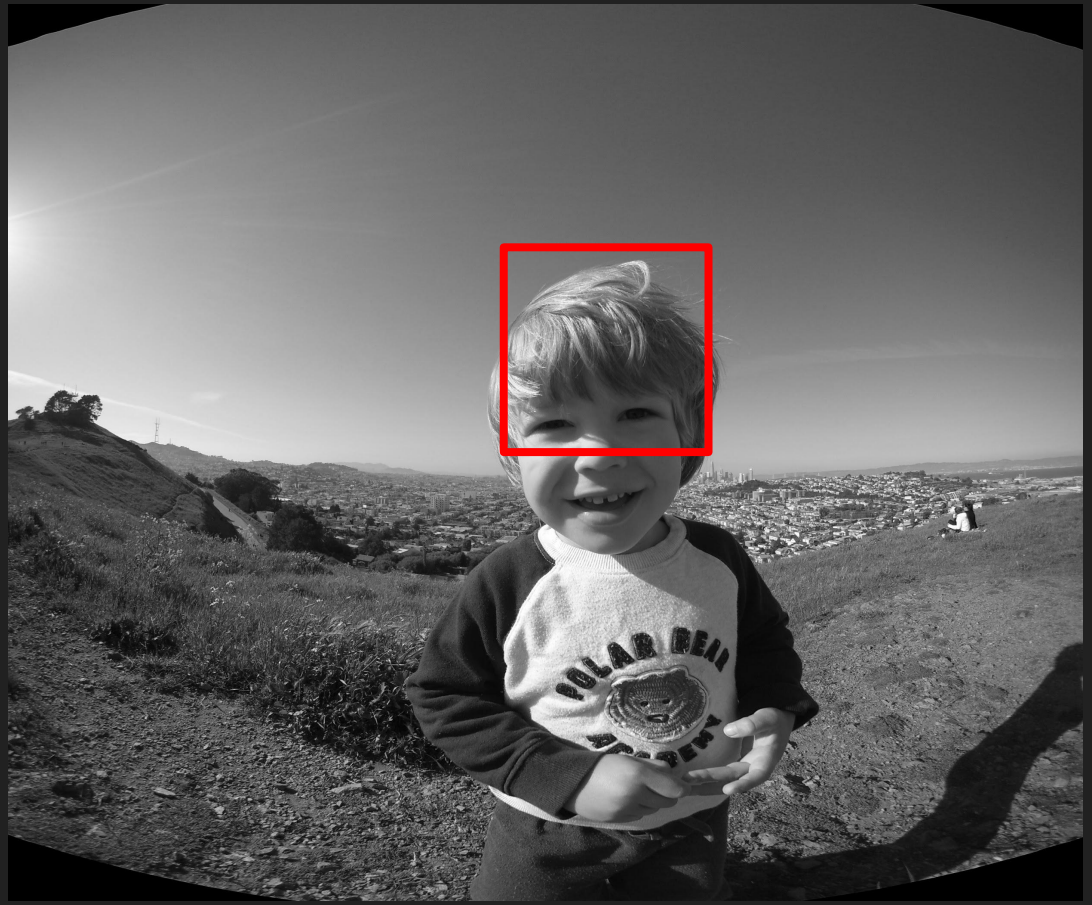
Color transfer (Huawei P20 Pro), our result

Challenging Cases (large disparities)

Color transfer, source view



Color transfer, target view



Color transfer, warp only

Color transfer, U-net

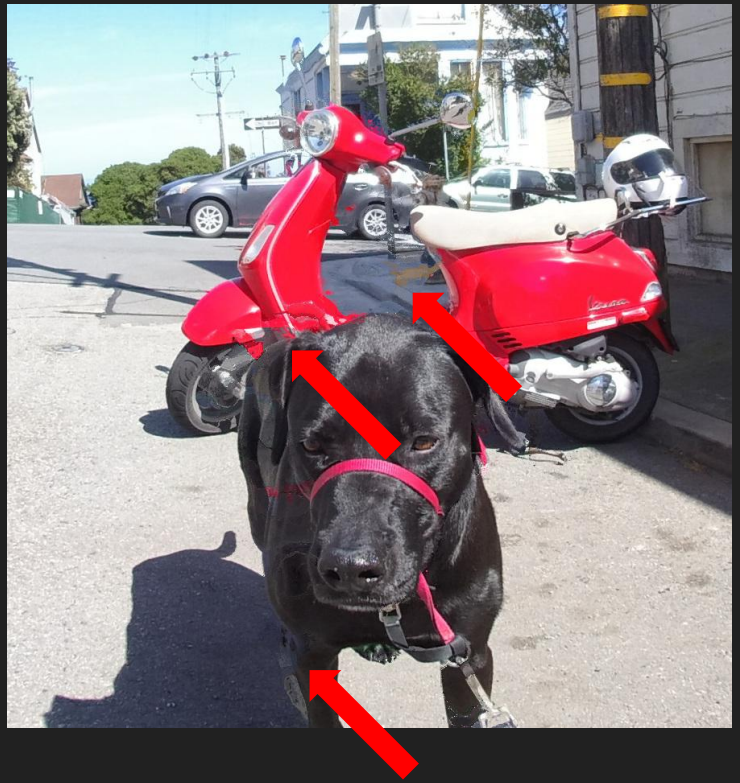
Color transfer, our result

Color transfer, ground truth

Color transfer, source view

Color transfer, target view

Color transfer, warp only



Color transfer, U-net

Color transfer, our result

Color transfer, ground truth

Color transfer, source view

The disparity (~ 880 pixels) in this example is beyond the theoretical maximum that our method can support without changing the settings such as the pyramid depth.

Color transfer, target view

The disparity (~ 880 pixels) in this example is beyond the theoretical maximum that our method can support without changing the settings such as the pyramid depth.

Color transfer, warp only

The disparity (~ 880 pixels) in this example is beyond the theoretical maximum that our method can support without changing the settings such as the pyramid depth.

Color transfer, U-net

The disparity (~ 880 pixels) in this example is beyond the theoretical maximum that our method can support without changing the settings such as the pyramid depth.

Color transfer, our result

The disparity (~ 880 pixels) in this example is beyond the theoretical maximum that our method can support without changing the settings such as the pyramid depth.

Color transfer, ground truth

The disparity (~ 880 pixels) in this example is beyond the theoretical maximum that our method can support without changing the settings such as the pyramid depth.

Detail Transfer

Detail transfer, source view

Detail transfer, target view

Detail transfer, warp only

Detail transfer, U-Net

Detail transfer, our result

Detail transfer, ground truth

Detail transfer, source view

Detail transfer, target view

Detail transfer, warp only

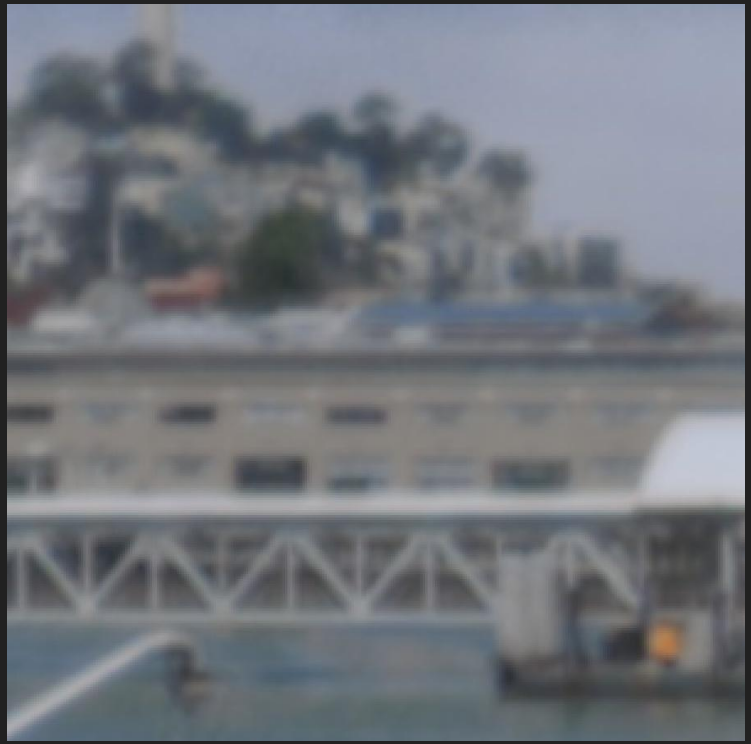
Detail transfer, U-Net

Detail transfer, our result

Detail transfer, ground truth

Detail transfer, source view

Detail transfer, target view



Detail transfer, warp only

Detail transfer, U-Net

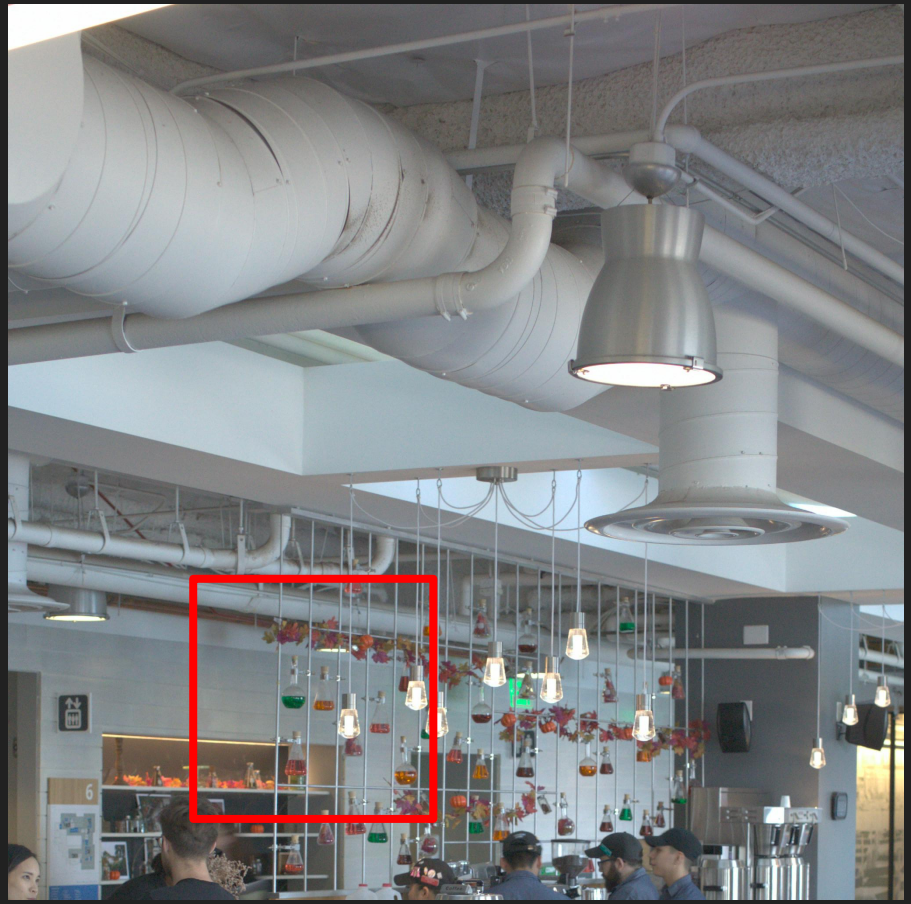
Detail transfer, our result

Detail transfer, ground truth

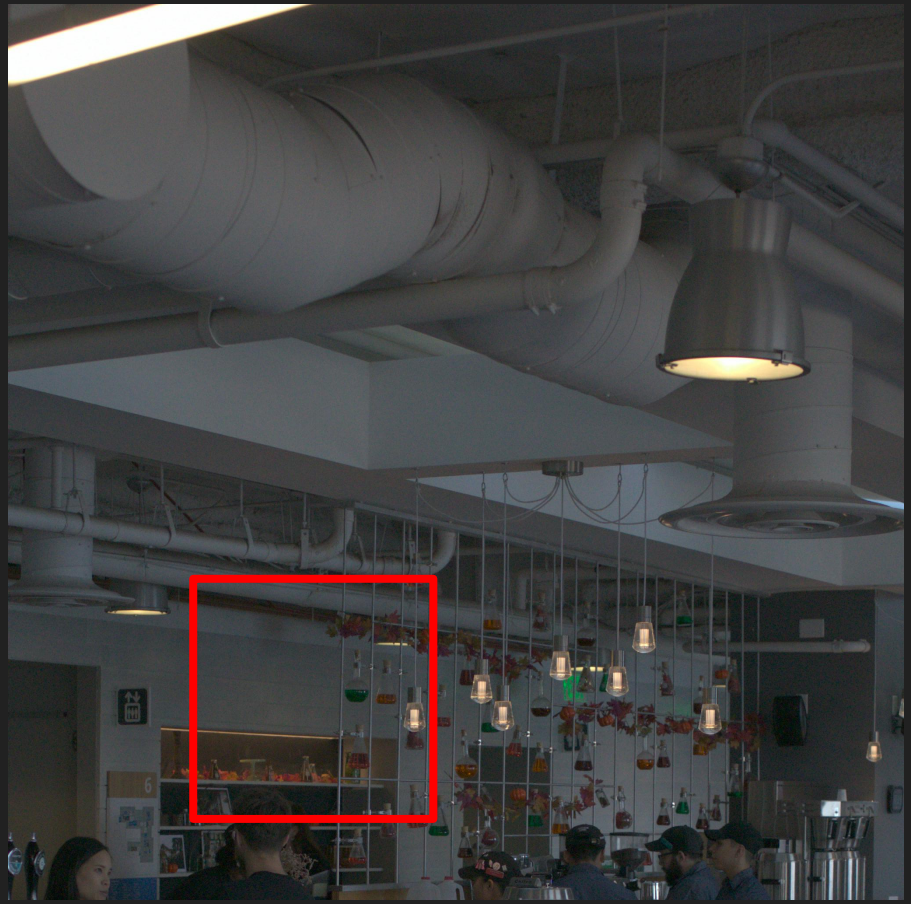
Multi-view HDR Fusion

Spatially misaligned dataset (stereo pairs)

Multi-view HDR fusion, source view



Multi-view HDR fusion, target view



Multi-view HDR fusion, U-Net

Multi-view HDR fusion, our result

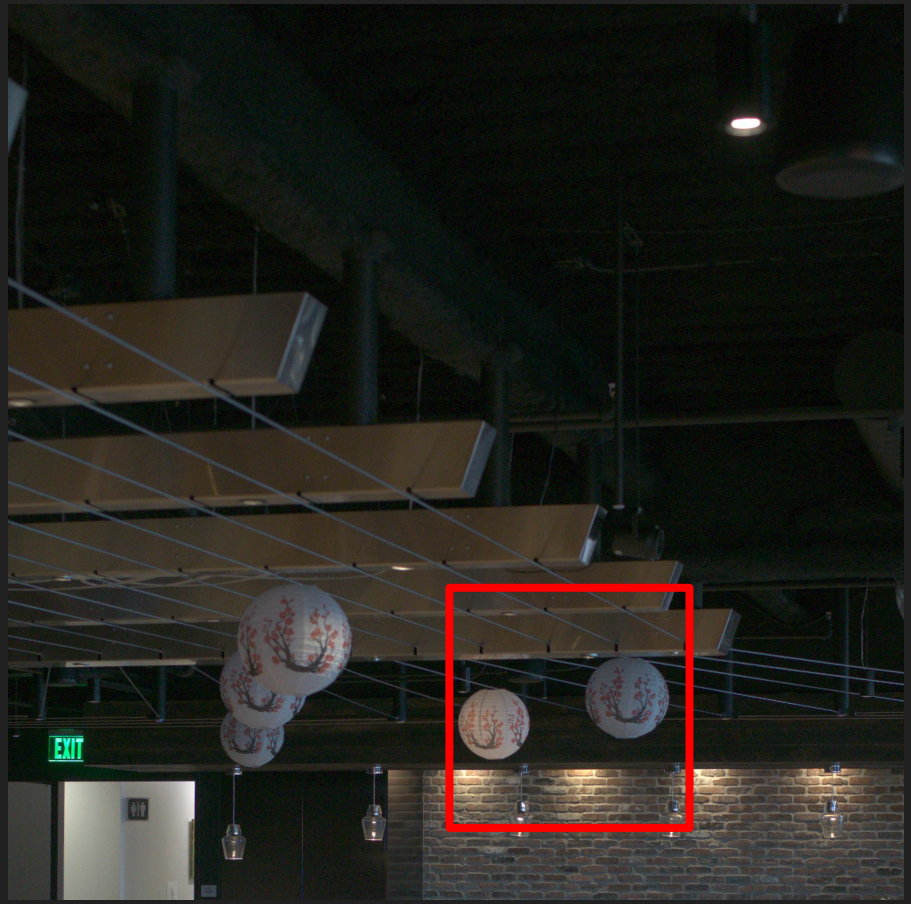
Multi-view HDR fusion, ground truth

Multi-view HDR fusion, source view

Brightness increased for visualization

Multi-view HDR fusion, target view

Brightness increased for visualization



Multi-view HDR fusion, U-Net

Brightness increased for visualization

Multi-view HDR fusion, our result

Brightness increased for visualization

Multi-view HDR fusion, ground truth

Brightness increased for visualization

Multi-view HDR fusion, source view

Contrast/brightness enhanced for visualization

Multi-view HDR fusion, target view

Contrast/brightness enhanced for visualization

Multi-view HDR fusion, U-net

Contrast/brightness enhanced for visualization

Multi-view HDR fusion, our result

Contrast/brightness enhanced for visualization

Multi-view HDR fusion, ground truth

Contrast/brightness enhanced for visualization

Multi-frame HDR Fusion

Temporal misalignment (Kalantari et al. dataset)

Multi-frame HDR fusion, source frame 1

Multi-frame HDR fusion, source frame 2

Multi-frame HDR fusion, target frame

Multi-frame HDR fusion, Kalantari et al. method

Multi-frame HDR fusion, our result

Multi-frame HDR fusion, ground truth

Multi-frame HDR fusion, source frame 1

Multi-frame HDR fusion, source frame 2

Multi-frame HDR fusion, target frame

Multi-frame HDR fusion, Kalantari et al. method

Multi-frame HDR fusion, our result

TODO:
Point out that our method resolves the highlight on the window frame a little bit better.
Add a crop.

Multi-frame HDR fusion, ground truth

Multi-frame HDR fusion, source frame 1

Denoising the above region is extra challenging, because some of it is covered in the long exposure image.

Multi-frame HDR fusion, source frame 2

Denoising the above region is extra challenging, because some of it is covered in the long exposure image.

Multi-frame HDR fusion, target frame

Denoising the above region is extra challenging, because some of it is covered in the long exposure image.

Multi-frame HDR fusion, Kalantari et al. method

Denoising the above region is extra challenging, because some of it is covered in the long exposure image.

Multi-frame HDR fusion, our result

Denoising the above region is extra challenging, because some of it is covered in the long exposure image.

Multi-frame HDR Fusion, ground truth

Failure Case

Multi-frame HDR fusion, source frame 1

Multi-frame HDR fusion, source frame 2

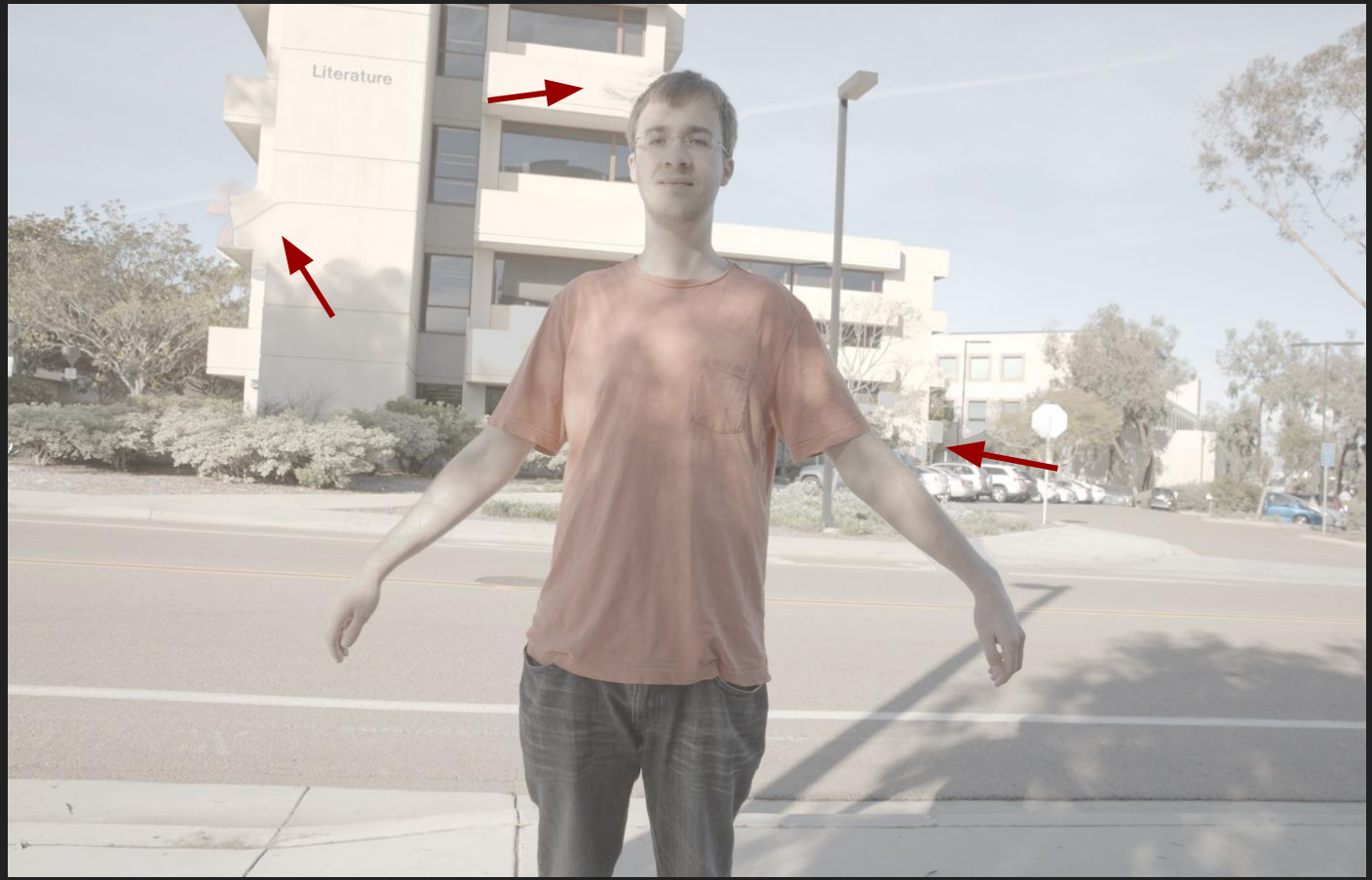
Multi-frame HDR fusion, target frame

This is a challenging case because the target frame has large blown out regions.

Multi-frame HDR fusion, our result

Both the method by Kalantari et al. and our method fails to properly align images in blown out regions.

Multi-frame HDR fusion, Kalantari et al. method



Both the method by Kalantari et al. and our method fails to properly align images in blown out regions.

Multi-frame HDR fusion, ground truth

Both the method by Kalantari et al. and our method fails to properly align images in blown out regions.