# Camouflage Anything: Supplementary Materials

## 1    Examples from Synthetic Camouflaged Dataset

As we utilize segmented images from SOD and SEG splits from LAKE-RED evaluation dataset, we are able to create paired image and mask dataset for generic objects other than ones in COD dataset. We show examples in figure 1
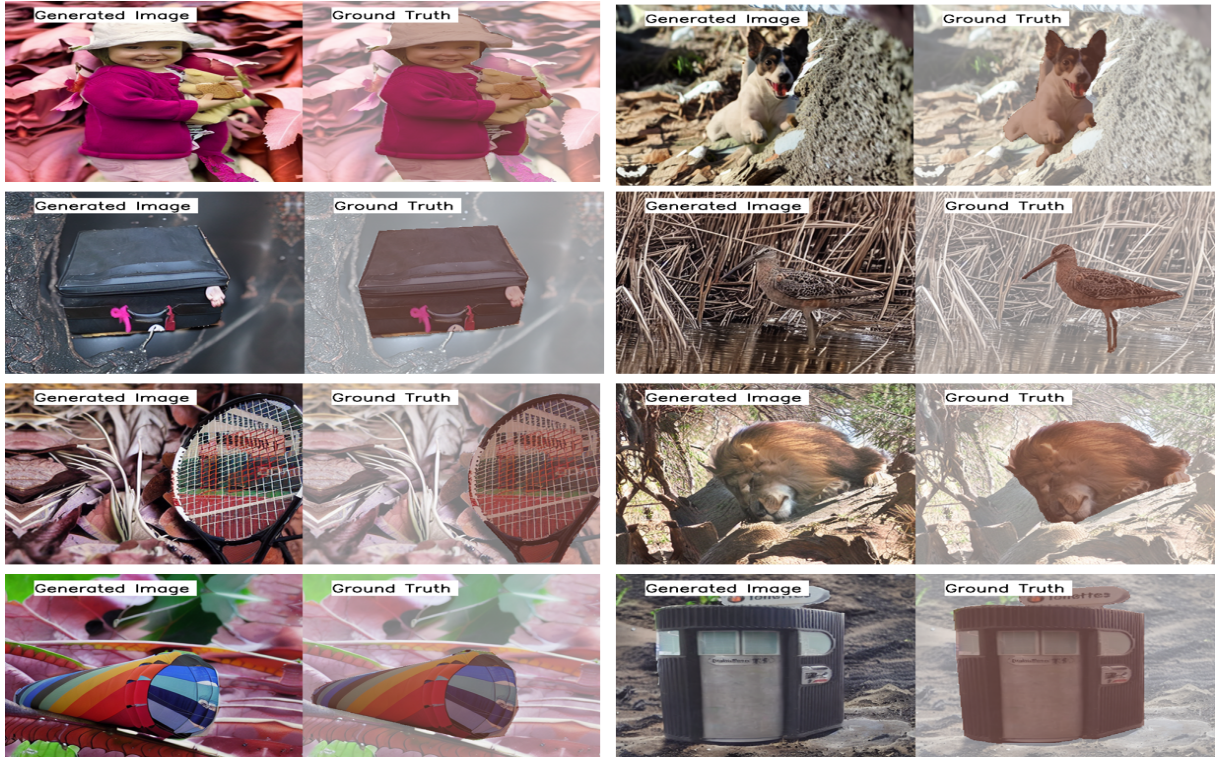


Figure 1: **Generated Camouflaged Image and Mask with our method.** We show generated images and corresponding mask sampled from SOD and SEG split of LAKE-RED evaluation set.

## 2    Failure Cases & Room for Improvement

In our experiments, we identified several failure cases that highlight the limitations of our method. Notably, our approach tends to underperform when generating images containing people. This underperformance can be attributed to several factors, including the complexity of human poses, variations in lighting, and occlusions that complicate the accurate placement of objects in relation to human figures. It is to be noted that our base model Stable diffusion 1.5, also tend to underperform in generating people images.

Additionally, we observed instances where our method resulted in objects being placed in unnatural scenarios. For example, we encountered cases where a plane was situated on a stone surface or a bus appeared submerged in a coral reef. These failures suggest that our model struggles with limitations imposed by training data scenarios, leading to implausible object placements that do not align with real-world physics or typical environmental settings.

Figure 2: **Failure Cases for our method.** We can notice that our method tends to under perform on people images and can lead to cases of objects being placed in un natural scenarios, like plane on stone and bus in coral reef.

# 3 BiRefNet + LoRA Experiments

As outlined in Section 4.3 in paper, we fine-tuned BiRefNet with LoRA on generated images to assess improvements in segmentation quality in general scenarios. We present more results for our experiments in figure 3
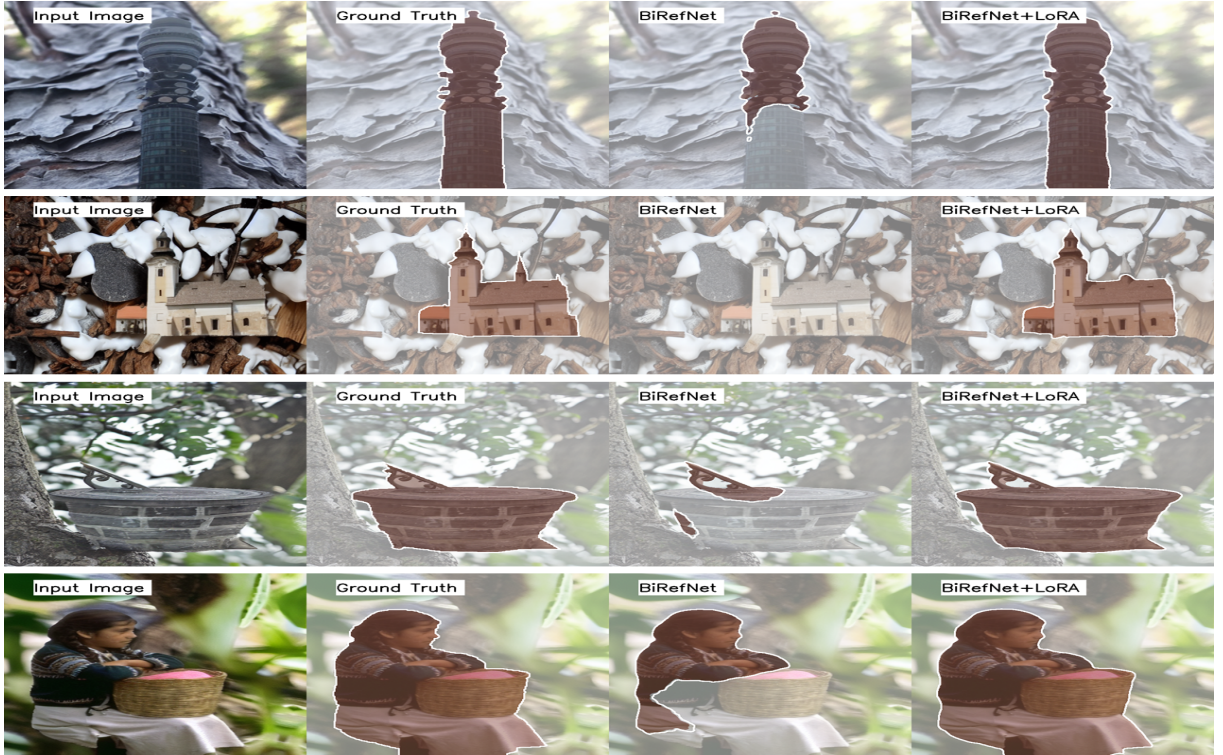


Figure 3: **Comparison of BiRefNet on General Camouflaged Image with LoRA tuned BiRefNet.** With LoRA tuning, cases of missing segmentation and partial segmentation is solved for general objects not in standard COD datasets.

# 4    Qualitative Ablation

Our analysis reveals that the inclusion of representation engineering (+RE) significantly enhances the quality of textures in the background. Furthermore, when a background color is incorporated into the control image (+BG), we observe a tendency for the foreground and background colors to converge, resulting in a more cohesive visual appearance. We show more examples here in supplementary ( check figure 4 ).
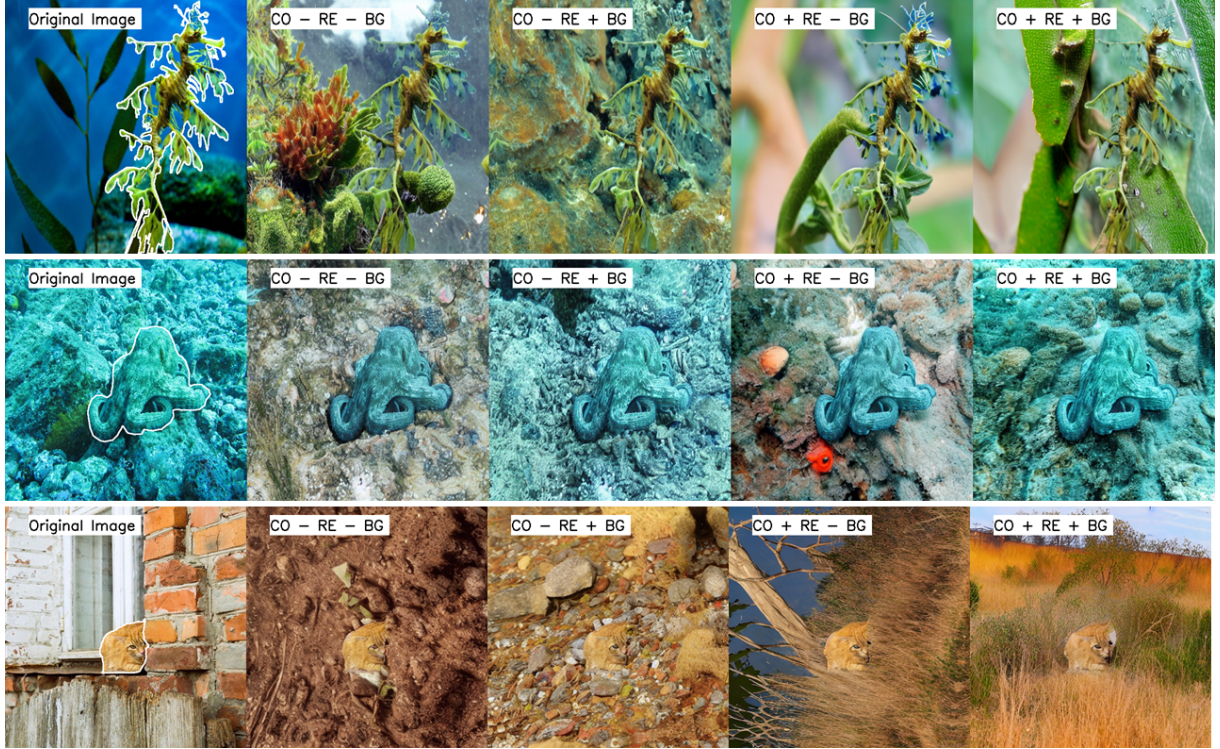


Figure 4: **Qualitative Ablation Study for Different configuration from images in COD Split.** We can notice that with +BG (Control), the images tend to have similar foreground and background color. We find that +RE enables in creation of higher quality textures in background.