Supplementary Material
SegBuilder: A Semi-automatic Annotation Tool for Segmentation

Semantic segmentation qualitative results: We demonstrate some sample predictions from our trained HRNetv2 model on the test split in Figure 1.

Supercategory-Specific Part Names for the Part Annotation Experiment: PartImageNet provides fine-grained annotations for 158 objects catgorized under 11 supercaterories, i.e., *fish, quadruped, reptile, snake, bird, aeroplane, car, biped, bicycle, boat*, and *bottle*. We selected a subset of 58 images from PartImageNet [1], covering all the 11 super-categories. In Figure 2, we show sample images from the remaining three super-categories (not shown in the main paper), i.e., *bottle, bicycle,* and *biped*.

Supercategory	Part names
Fish	Head, Body, Fin, Tail
Quadruped	Head, Body, Foot, Tail
Reptile	Head, Body, Foot, Tail
Snake	Head, Body
Bird	Head, Body, Wing, Foot, Tail
Aeroplane	Head, Body, Wing, Engine, Tail
Car	Body, Tier, Side Mirror
Boat	Body, Sail
Bicycle	Head, Body, Seat, Tier
Bottle	Body, Mouth
Biped	Head, Body, Hand, Foot, Tail

References

[1] Ju He, Shuo Yang, Shaokang Yang, Adam Kortylewski, Xiaoding Yuan, Jie-Neng Chen, Shuai Liu, Cheng Yang, Qihang Yu, and Alan Yuille. PartImageNet: A large, high-quality dataset of parts. In *European Conference on Computer Vision*, pages 128–145. Springer, 2022. 1
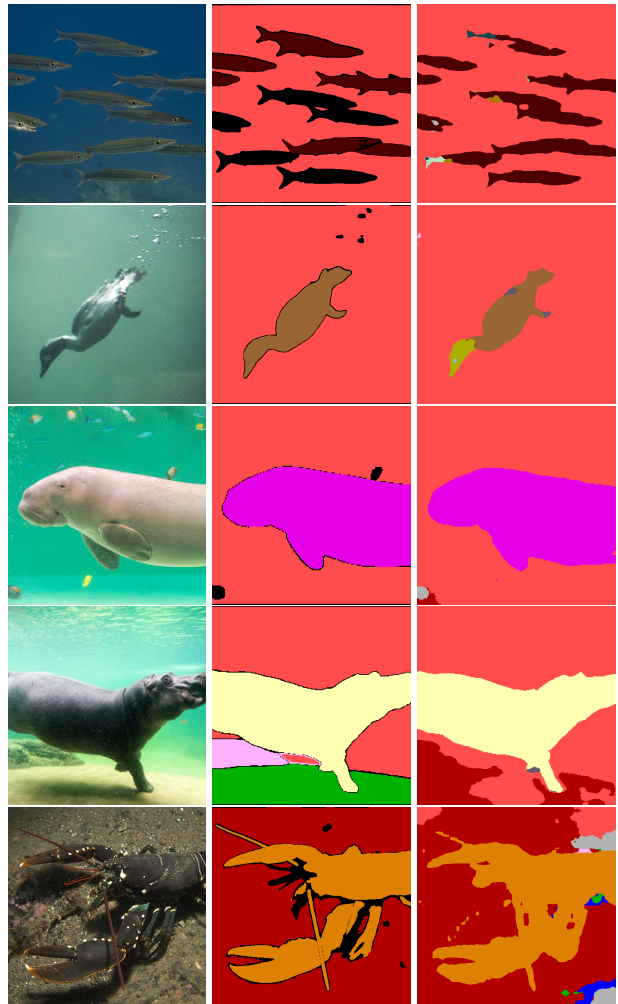
Figure 1. Sample predictions from our trained HRNetv2 model on the test split of the new dataset. Each row represents a separate sample image in the test split containing animals such as *barracouta, duck, dugong, hippo,* and *lobster*. The first column shows the RGB images, the second column displays the semantically annotated outputs from SegBuilder, and the last column presents the semantic segmentation output from HRNetv2.

Figure 2. Part segmentation on sample images from the PartIm-ageNet dataset. From top to bottom, we present sample images from each of the super-categories: *bottle, bicycle,* and *biped*. Each row displays an image (left column), its corresponding SAM segmentation output (middle column), and the segmentation obtained using SegBuilder (right column). The segmentation results clearly show that SAM fails to accurately segment essential parts. The additional tool we introduced in SegBuilder allows for reannotation of regions corresponding to different parts.