

Prototype Mixture Models for Few-shot Semantic Segmentation

Supplementary Material

Paper ID 700

This supplementary material includes cross-validation classes for Pascal-5ⁱ and COCO-20ⁱ, additional semantic segmentation results and per-class performance comparison on Pascal-5ⁱ.

Table 1. Cross-validation classes for Pascal-5ⁱ

Dataset	Test class
Pascal-5 ⁰	aeroplane, bicycle, bird, boat, bottle
Pascal-5 ¹	bus, car, cat, chair, cow
Pascal-5 ²	diningtable, dog, horse, motorbike, person
Pascal-5 ³	potted plant, sheep, sofa, train, tvmonitor

Table 2. Cross-validation classes for COCO-20ⁱ.

Dataset	Test class
COCO-20 ⁰	person, airplane, boat, parking meter, dog,
	elephant, backpack, suitcase, sports ball, skateboard,
	wine glass, spoon, sandwich, hot dog, chair,
	dining table, mouse, microwave, scissors
COCO-20 ¹	bicycle, bus, traffic light, bench,
	horse, bear, umbrella, frisbee, kite, surfboard
	cup, bowl, orange, pizza, couch,
	toilet, remote, oven, book, teddy bear
COCO-20 ²	car, train, fire hydrant, bird, sheep,
	zebra, handbag, skis, baseball bat, tennis racket
	fork, banana, broccoli, donut, potted plant,
	tv, keyboard, sink, toaster, clock, hair drier
COCO-20 ³	motorcycle, truck, stop sign, cat, cow,
	giraffe, tie, snowboard, baseball glove, bottle
	knife, apple, carrot, cake, bed,
	laptop, cell phone, refrigerator, vase, toothbrush

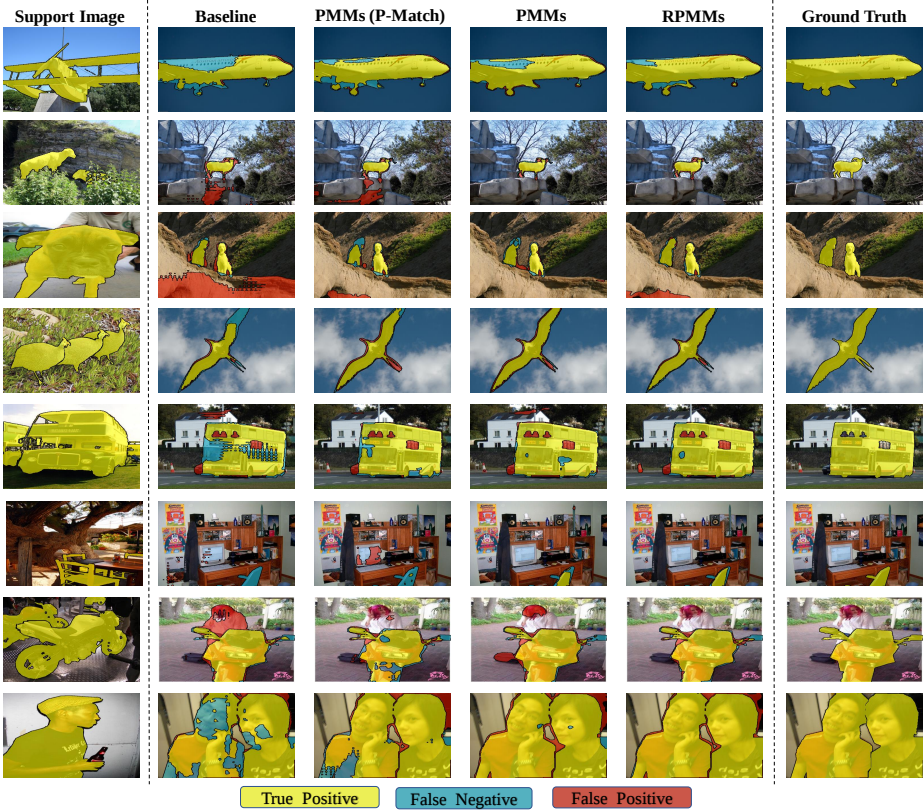


Fig. 1. Few-shot semantic segmentation results. ‘Baseline’ refers to the CANet method without iterative optimization. (Best viewed in color)

Cross-validation classes. Table 1 shows the cross-validation classes for Pascal-5ⁱ. Table 2 shows the cross-validation classes for COCO-20ⁱ

Semantic segmentation results. Fig. 1 compares the segmentation results of the baseline method, PMMs(P-Match), PMMs and RPMMs on Pascal-5ⁱ. Fig. 2 shows the results predicted by RPMMs on COCO-20ⁱ dataset.

Comparison of per-class performance. Fig. 3 compares per-class segmentation performance on Pascal-5ⁱ. It can be seen that our PMMs approach is effective for many classes on this dataset.

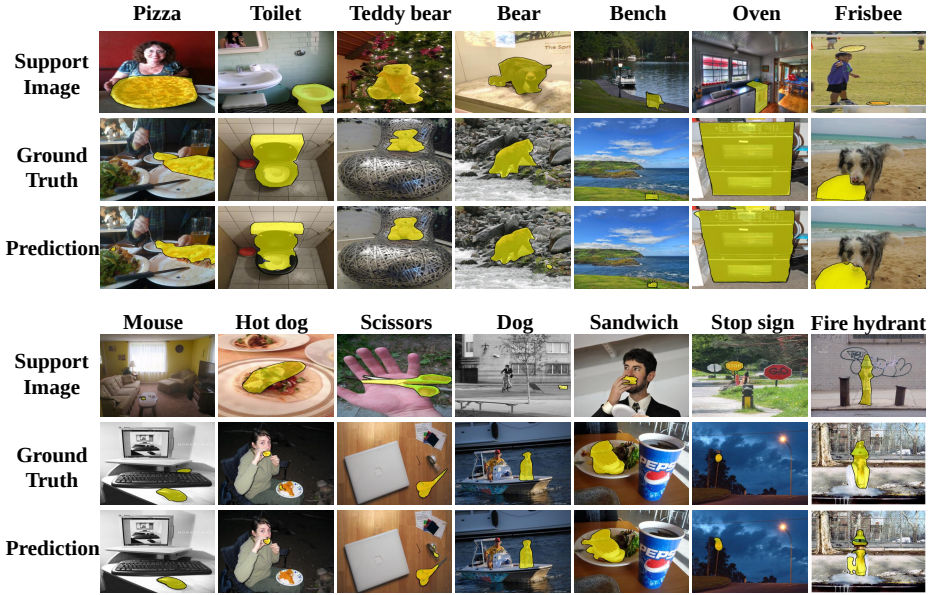


Fig. 2. Few-shot semantic segmentation results on COCO-20ⁱ.

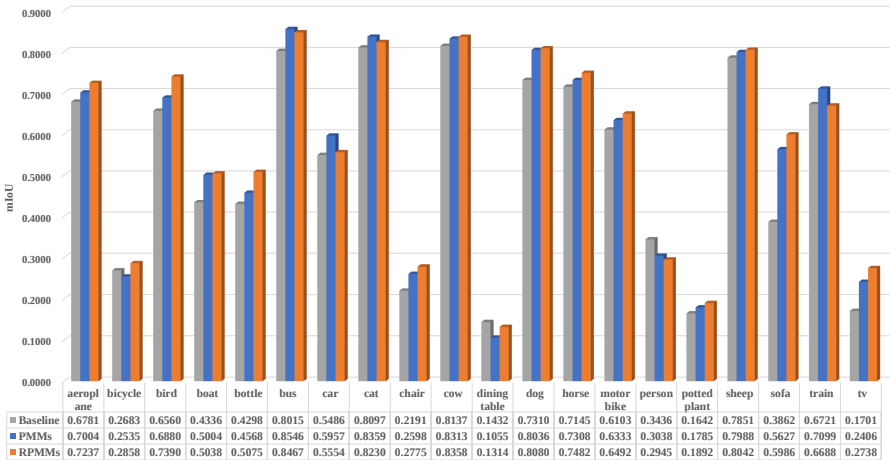


Fig. 3. Comparison of per-class segmentation performance on Pascal-5ⁱ.