

# Supplementary material: Bottom-up Segmentation for Top-down Detection

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## 1. Results

In the supplementary material, we include more detection results, comparing CPMC-based detector [1], DPM [2] and our segDPM [3] approach. Each row shows (from left to right), (a) original image with GT annotations, (b) CPMC-based detector with the corresponding segmentation, (c) DPM, (d) our approach. For each method, we show top  $k$  detections for each class, where  $k$  is the number of boxes for that class in GT. For example, for an image with two person GT boxes and a dog, we show top 2 scoring boxes for person and the top scoring box for dog. In Fig. 1- 11 we show successful detections, while Fig. 12- 14 depict the failures.

## References

- [1] J. Carreira, F. Li, and C. Sminchisescu. Object Recognition by Sequential Figure-Ground Ranking. *IJCV*, 2011. 1
- [2] P. Felzenszwalb, R. Girshick, D. McAllester, and D. Ramanan. Object detection with discriminatively trained part based models. *PAMI*, 32(9), 2010. 1
- [3] S. Fidler, R. Mottaghi, A. Yuille, and R. Urtasun. Bottom-up segmentation for top-down detection. In *CVPR*, 2013. 1



Figure 1. Examples of **successful** detections.

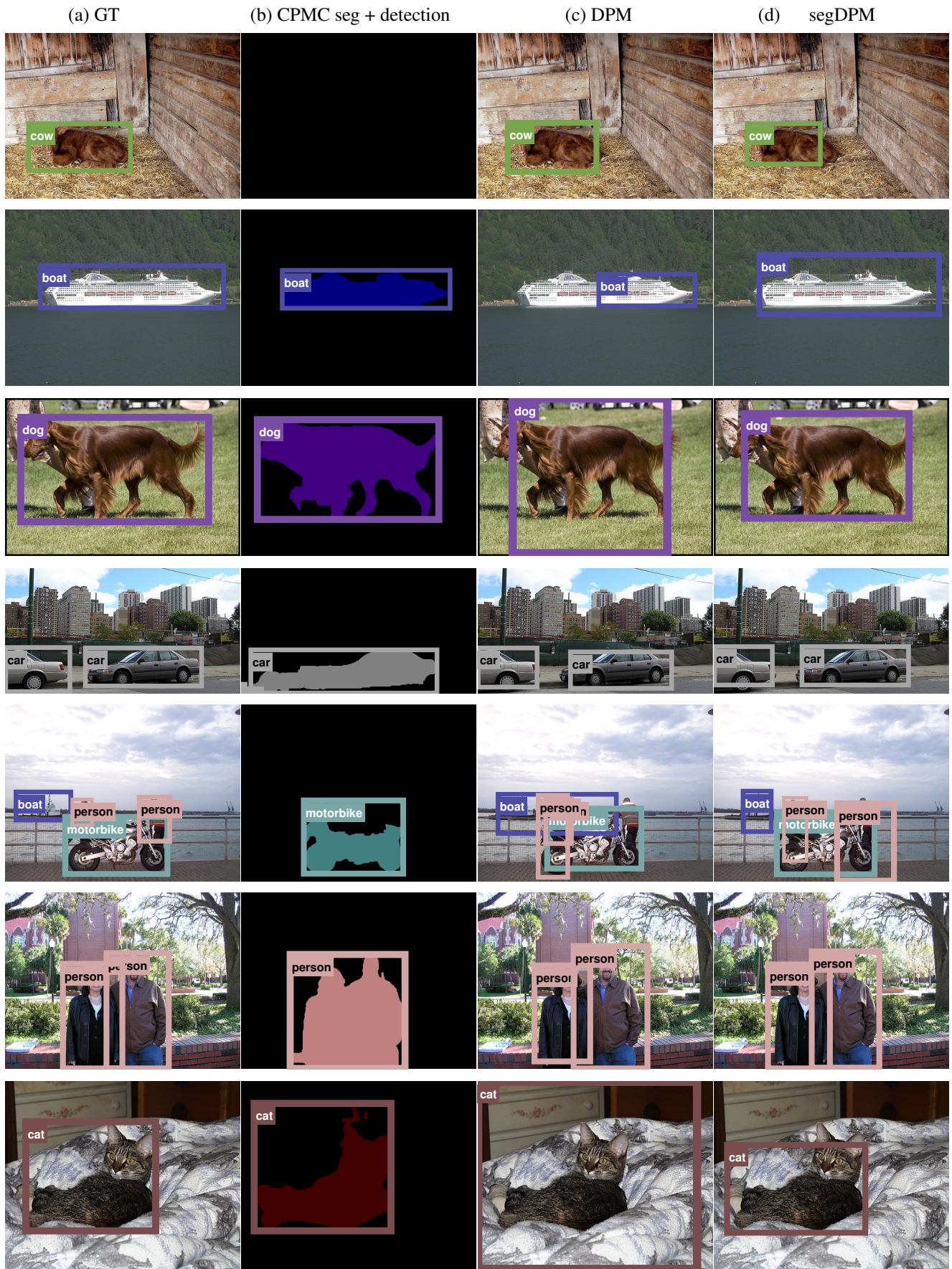


Figure 2. Examples of <sup>3</sup>successful detections.

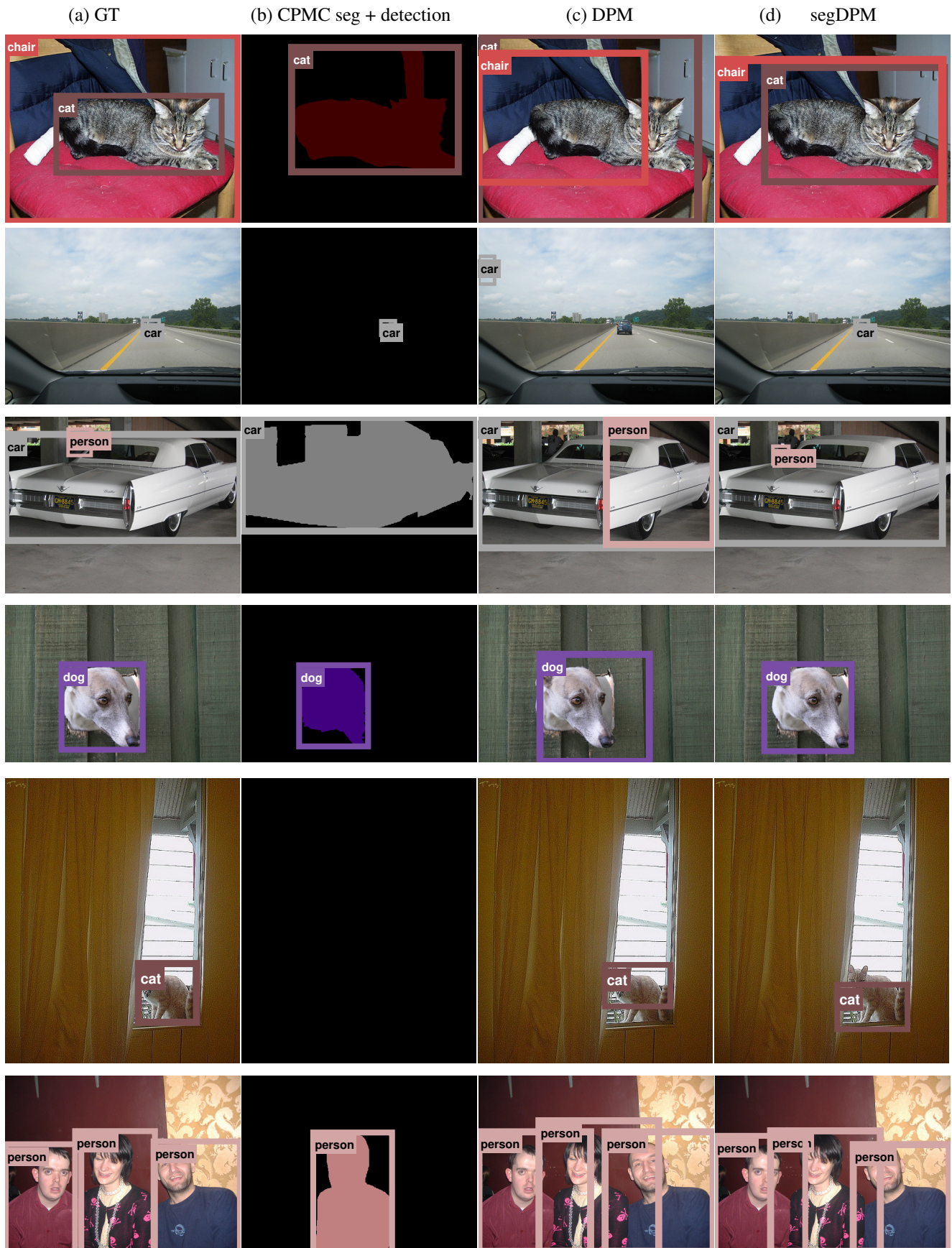


Figure 3. Examples of successful detections.

(a) GT

(b) CPMC seg + detection

(c) DPM

(d) segDPM

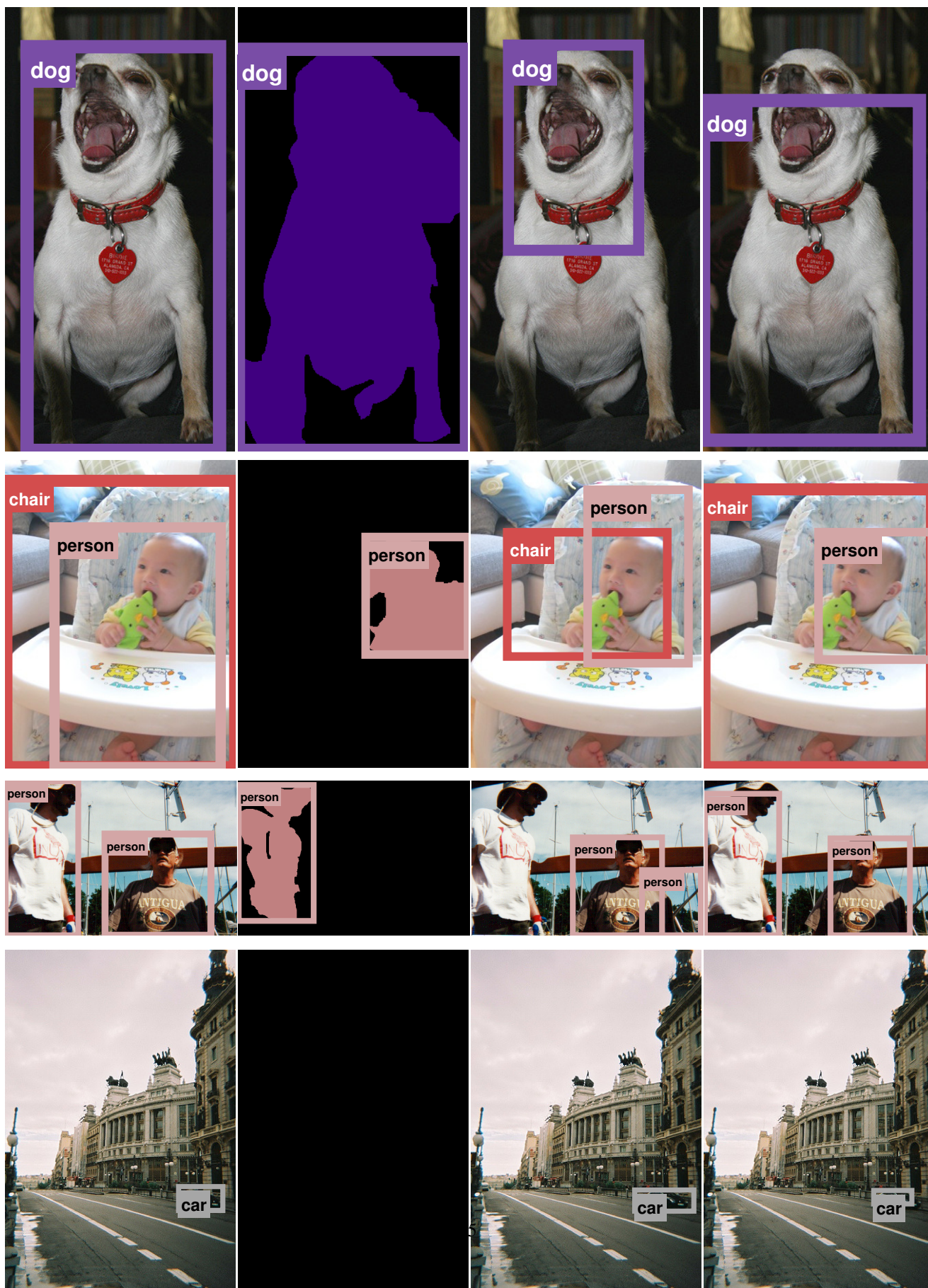


Figure 4. Examples of **successful** detections.



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Figure 5. Examples of **successful** detections.

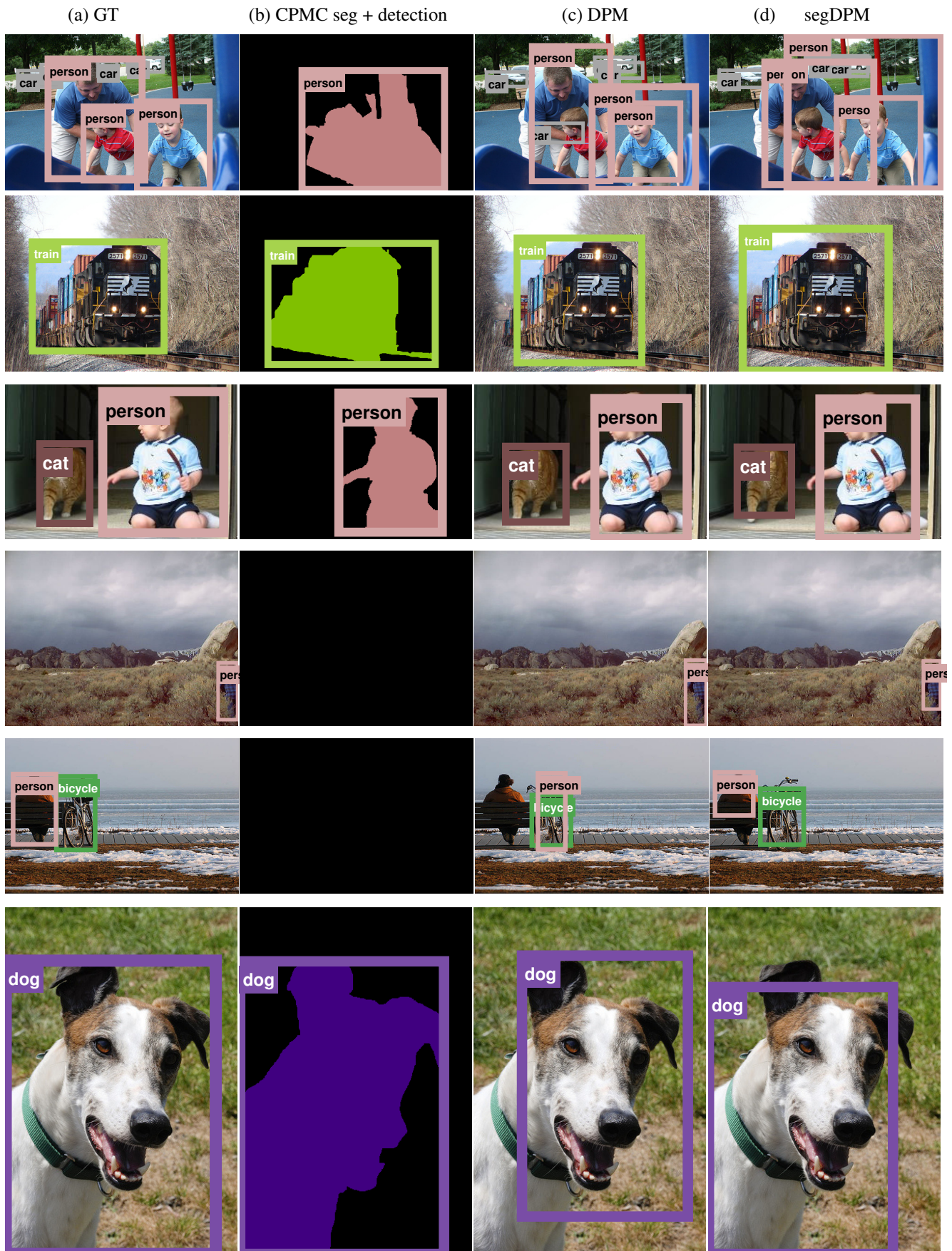


Figure 6. Examples of <sup>7</sup>successful detections.

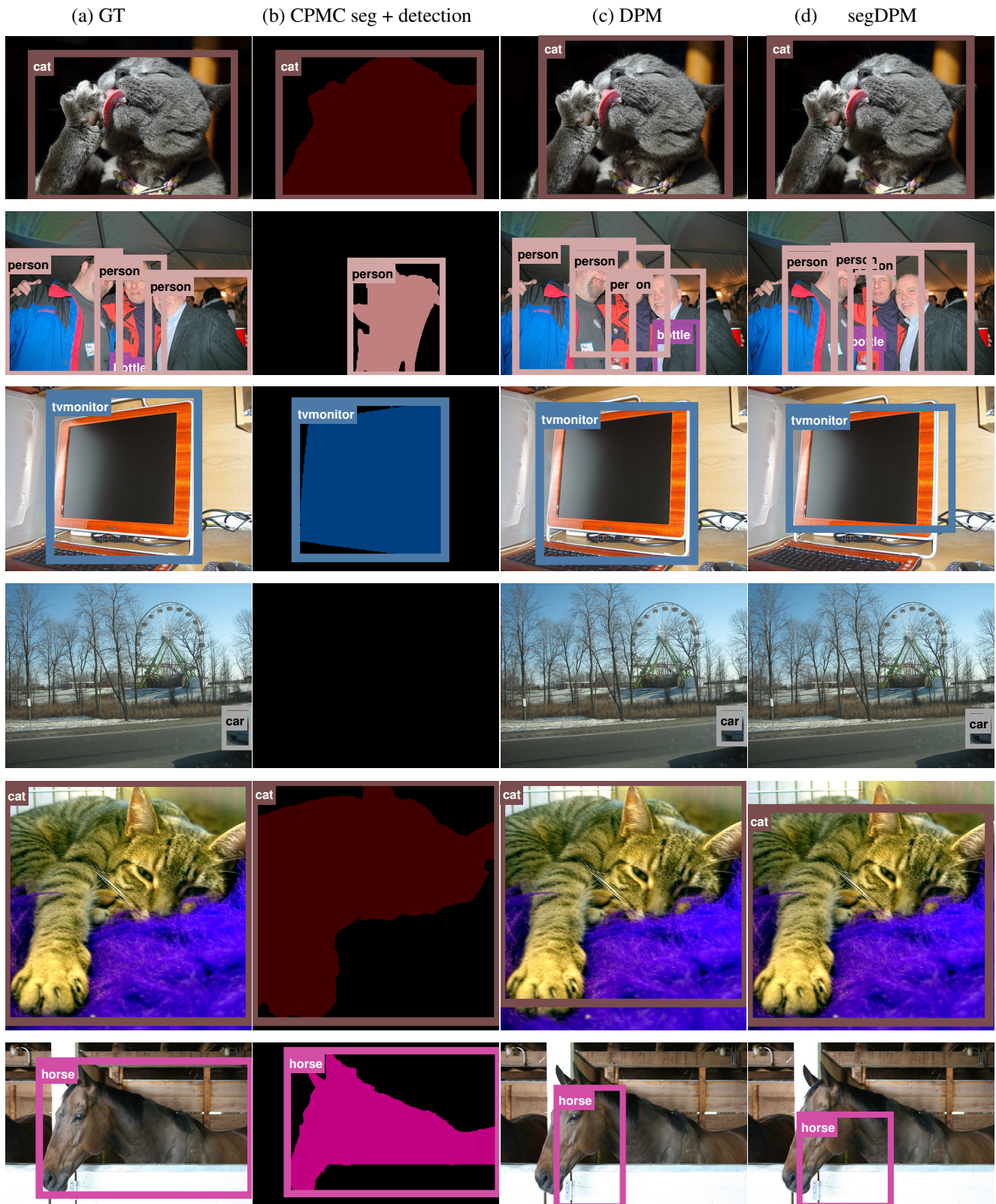


Figure 7. Examples of **successful** detections.

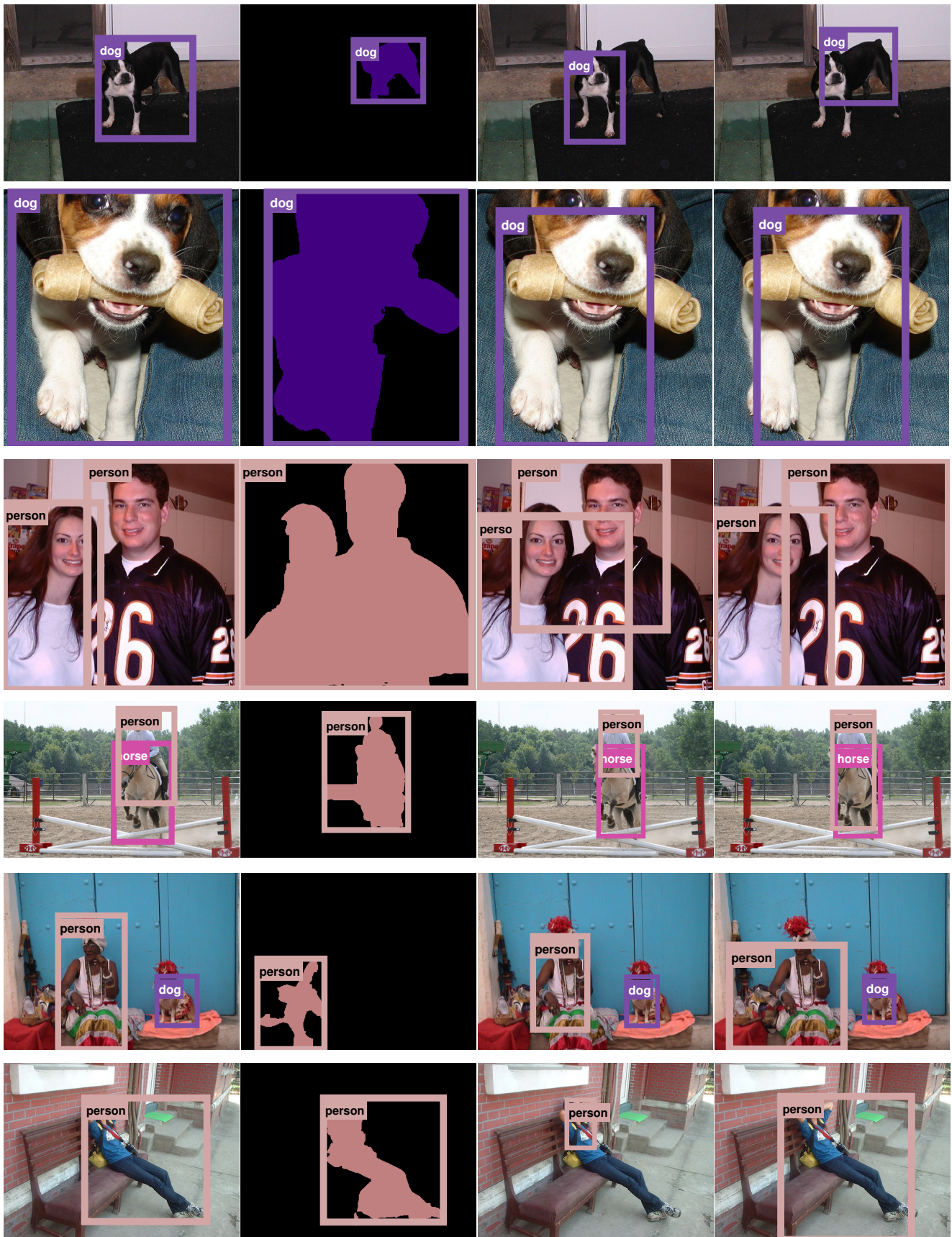


(a) GT

(b) CPMC seg + detection

(c) DPM

(d) segDPM



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Figure 8. Examples of **successful** detections.

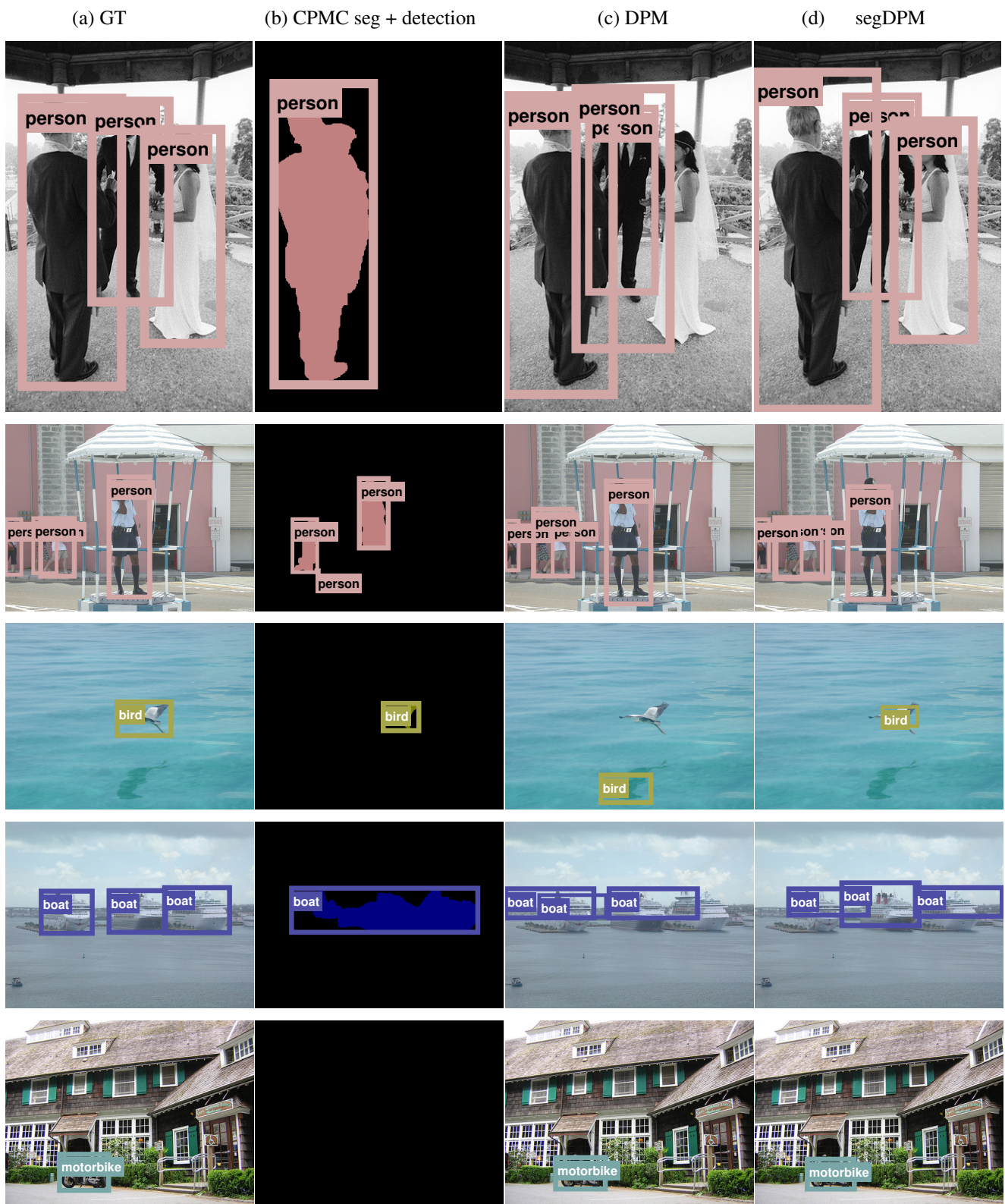


Figure 9. Examples of **successful** detections.

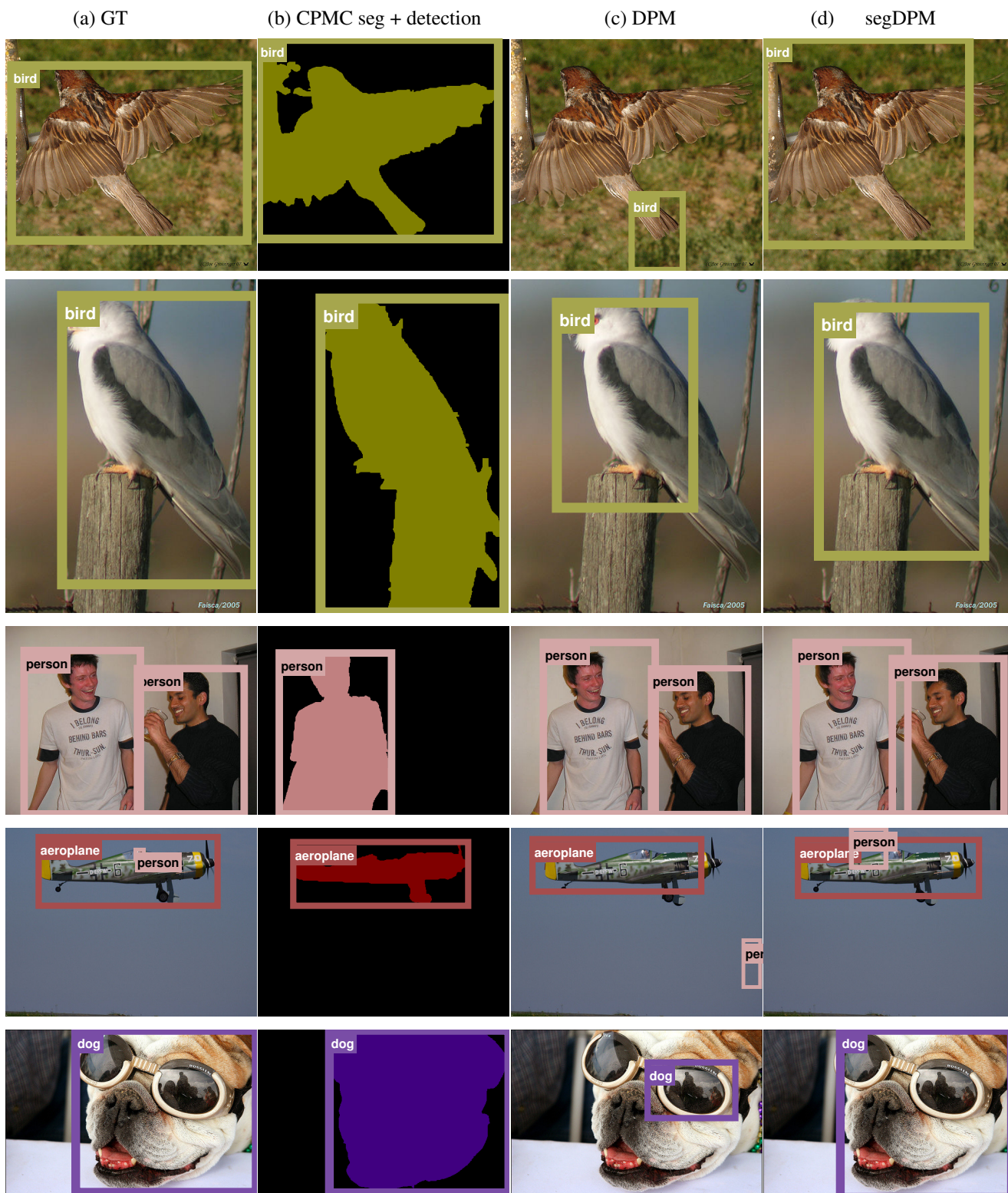


Figure 10. Examples of **successful** detections.

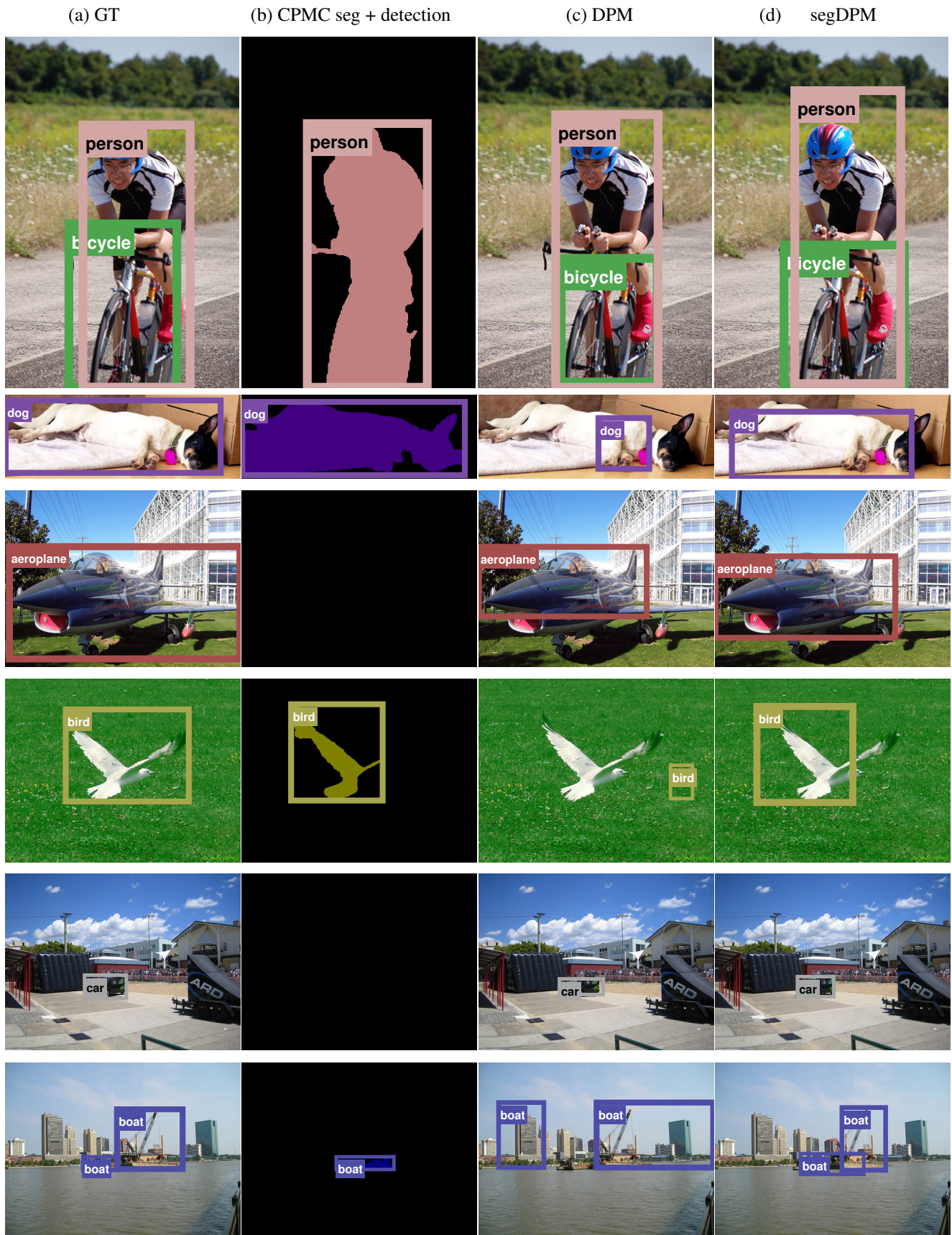


Figure 11. Examples of **successful** detections.

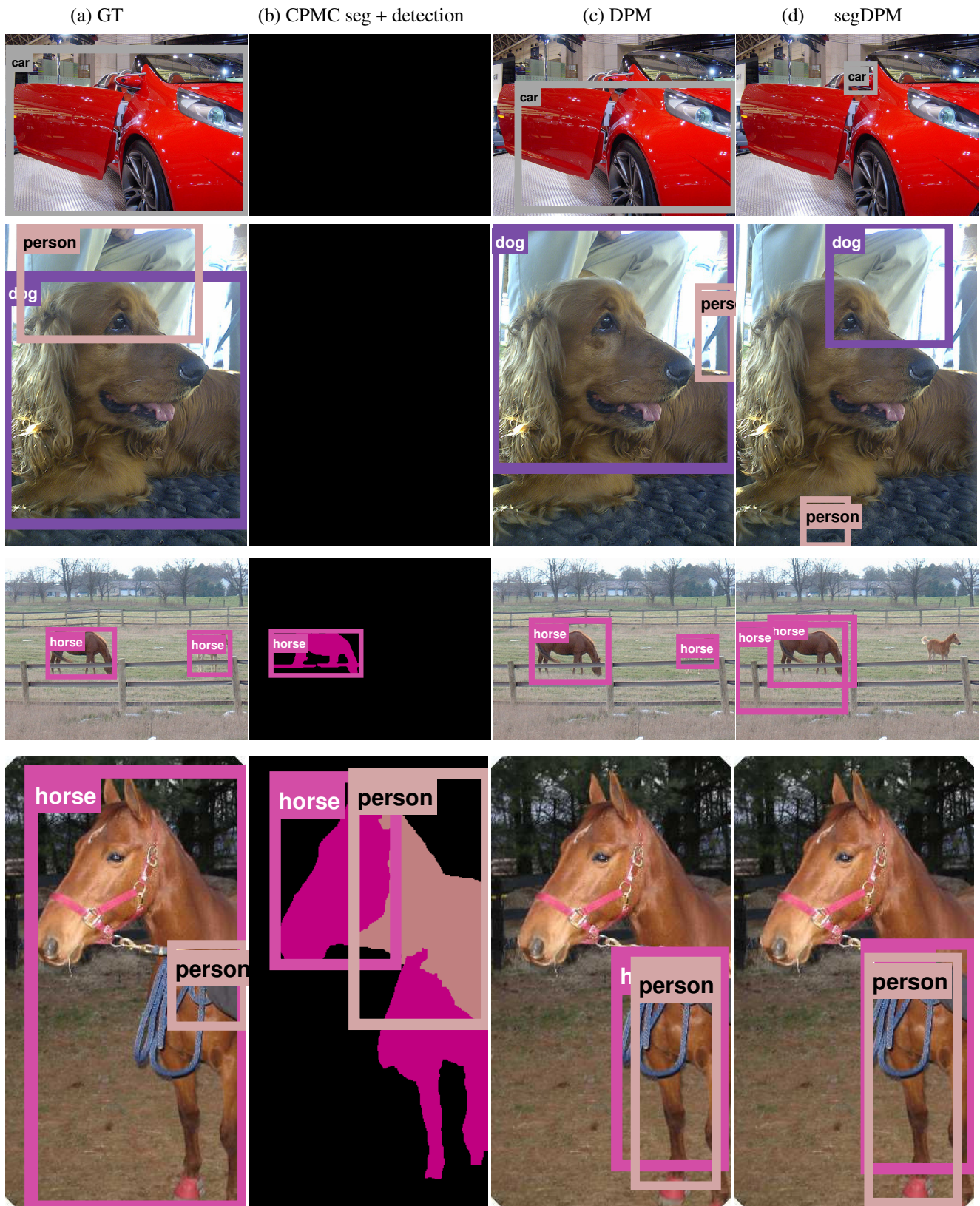


Figure 12. Examples of **failed** detections.



Figure 13. Examples of failed detections.



Figure 14. Examples of failed detections.