

Camouflaged Object Segmentation



CAMO Dataset





Camouflaged Object (CAMO) dataset specifically designed for the task of camouflaged object segmentation. We focus on two categories, i.e., *naturally camouflaged objects* and *artificially camouflaged objects*, which usually correspond to animals and humans in the real world, respectively.

Camouflaged object images consists of 1250 images (1000 images for the training set and 250 images for the testing set). *Non-camouflaged object* images are collected from the MS-COCO dataset (1000 images for the training set and 250 images for the testing set).

CAMO has objectness mask ground-truth.

Our new CAMO++ dataset with instance-level annotations is [here](#).

State of the Art Camouflaged Object Segmentation on CAMO

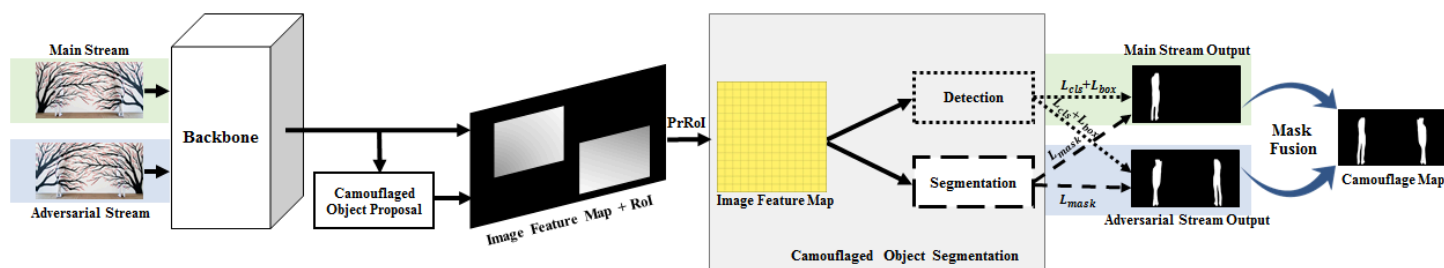


MirrorNet	2021	ResNet-50	w/o	0.100	72.3	65.2	74.1	80.4
MirrorNet	2021	ResNeXt-152	w/o	0.077	78.4	71.9	78.5	84.9
TINet	2021	ResNet-50	with	0.087	72.9	67.8	78.1	84.7
BASNet	2021	ResNet-50	with	0.096	-	64.6	74.9	79.6
JSOCOD	2021	ResNet-50	with	0.076	75.9	-	80.3	85.3
MGL	2021	ResNet-50	with	0.088	-	67.3	77.5	84.7
RankNet	2021	ResNet-50	with	0.085	-	72.5	79.3	82.6
PFNet	2021	ResNet-50	with	0.085	-	69.5	78.2	85.2

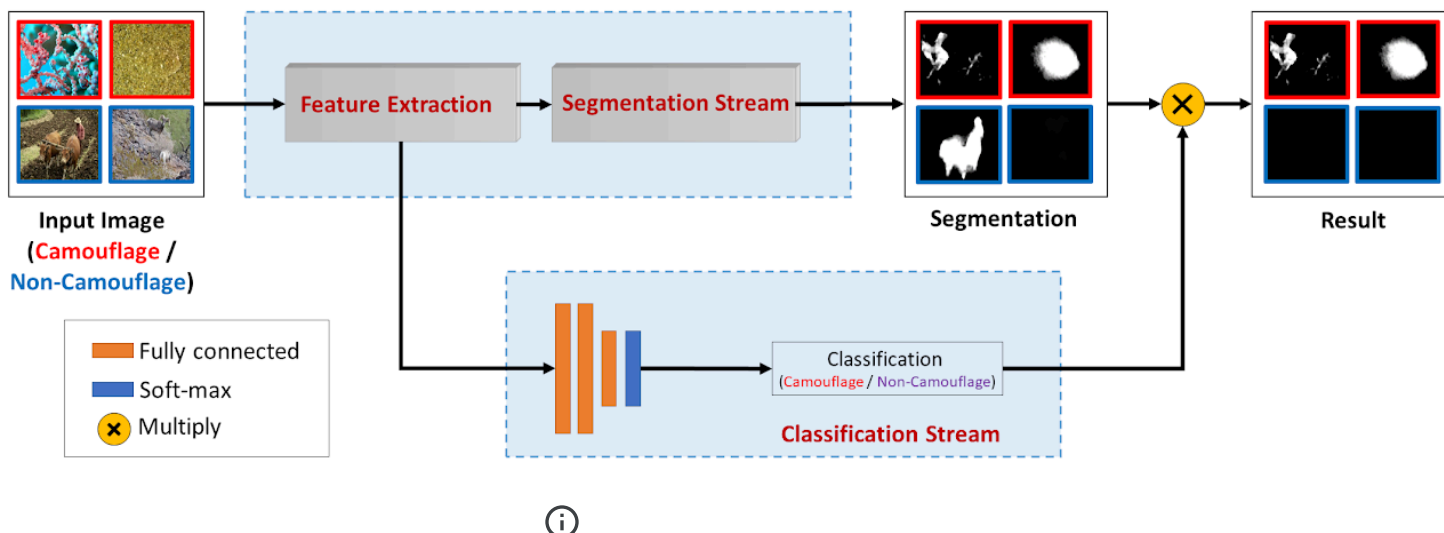
Is your technique missing although it's published? Let me know and I'll add it.

Methods

[MirrorNet \(IEEE Access 2021\)](#)



[ANet \(CVIU 2019\)](#)



Download

- **Datasets:** [\[CAMO\]](#) [\[Evaluation Code\]](#)
- **Code:** [\[ANet\]](#) [\[MirrorNet\]](#)
- **Pre-Computed Results:** [\[ANet\]](#) [\[MirrorNet\]](#)

If you use our **datasets**, **codes** or **results**, please cite the following publications:

```
@article{ltnghia-CVIU2019,
  Title      = {Anabranh Network for Camouflaged Object Segmentation},
  Author     = {Trung-Nghia Le and Tam V. Nguyen and Zhongliang Nie and Minh-Triet Tran and Akihiro Sugimoto},
  Journal    = {Journal of Computer Vision and Image Understanding},
```

```
@article{Jinnan-IEEEAccess2021,
  Title      = {MirrorNet: Bio-Inspired Camouflaged Object Segmentation},
  Author     = {Jinnan Yan and Trung-Nghia Le and Khanh-Duy Nguyen and Minh-Triet Tran and Thanh-Toan Do},
  Journal    = {IEEE Access},
```

Publications

- [Trung-Nghia Le](#), Tam V. Nguyen, Zhongliang Nie, Minh-Triet Tran, Akihiro Sugimoto, "**Anabranh Network for Camouflaged Object Segmentation**", *Journal of Computer Vision and Image Understanding (CVIU)*, 2019. [\[PDF\]](#)
- Jinnan Yan, [Trung-Nghia Le](#), Khanh-Duy Nguyen, Minh-Triet Tran, Thanh-Toan Do, Tam V. Nguyen, "**MirrorNet: Bio-Inspired Camouflaged Object Segmentation**", *IEEE Access*, 2021. [\[PDF\]](#)

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