

## Supervised Segmentation

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1. AGSS-VOS: Attention Guided Single-Shot Video Object Segmentation [[ICCV19](#)]: attention-agnostic and attention-specific networks
2. DIANet: Dense-and-Implicit Attention Network [[arxiv1905](#)][[CODE](#)]: attention-based method, combined with LSTM and dense connection
3. ♥♥Efficient Multi-Scale 3D CNN with fully connected CRF for Accurate Brain Lesion Segmentation [[MIA 2017](#)][[CODE](#)]: multi-scale, 3D CRF, only 11 layers win BRATS 2015 and ISLES 2015.
4. ♥♥Joint shape learning and segmentation for medical images using a minimalistic deep network [[submitted to MIDL2019](#) reject] : multi-task, using boundary and distance transform, optic disc and optic cup
5. ♥♥LEARNING MUTUALLY LOCAL-GLOBAL U-NETS FOR HIGH-RESOLUTION RETINAL LESION SEGMENTATION IN FUNDUS IMAGES [[ISBI 2018](#)] : local global images fundus images
6. Attention U-Net: Learning Where to Look for the Pancreas [[MIDL 2018](#)]
7. ♥♥Automatic Lacunae Localization in Placental Ultrasound Images via Layer Aggregation [[MICCAI2018](#)]: compare different segmentation network architecture (Unet)
8. ♥Fully Convolutional Networks for Monocular Retinal Depth Estimation and Optic Disc-Cup Segmentation [[submitted to JBHI](#)]: depth image guided segmentation
9. ♥♥Convolutional Oriented Boundaries: From Image Segmentation to High-Level Tasks [[TPAMI2018](#)] : boundary detection, contour strength, and boundary orientation
10. ♥♥♥♥ICNet for Real-Time Semantic Segmentation on High-Resolution Images [[ECCV2018](#)] : high resolution image segmentation, light weight, high speed, multi scale
11. ♥♥♥Contour Knowledge Transfer for Salient Object Detection [[ECCV2018](#)]: contour segmentation, two branch, contour transfer to saliency mask
12. ♥♥Bidirectional Feature Pyramid Network with Recurrent Attention Residual Modules for Shadow Detection [[ECCV2018](#)]:
13. ♥♥♥Understanding Convolution for Semantic Segmentation

- [[WACV2018](#)]: dilated convolution and dense upsampling convolution
14. ♥♥♥♥ Non-Local Deep Features for Salient Object Detection [[CVPR2017](#)]: grid-CNN, boundary loss
  15. ♥♥♥♥ Exploring Uncertainty Measures in Deep Networks for Multiple Sclerosis Lesion Detection and Segmentation [[MICCAI2018](#)][[CODE](#)]
  16. ♥♥ Aleatoric uncertainty estimation with test-time augmentation for medical image segmentation with convolutional neural networks [[neurcomputing](#)] TTA
  17. ♥♥♥♥ Recurrent Residual Convolutional Neural Network based on U-Net (R2U-Net) for Medical Image Segmentation [[paper](#)][[CODE](#)]
  18. ♥♥♥♥ Attention U-Net: Learning Where to Look for the Pancreas [[MIDL18](#)][[CODE](#)]:
  19. ♥♥♥♥ Classification with an edge: improving semantic image segmentation with boundary detection [[ISPRS18](#)]: combine boundary and mask
  20. ♥♥♥ Deep Learning-Based Boundary Detection for Model-Based Segmentation with Application to MR Prostate Segmentation [[MICCAI18](#)]: boundary regression
  21. Boundary-weighted Domain Adaptive Neural Network for Prostate MR Image Segmentation [[Paper](#)]: supervised image segmentation using boundary information and GAN, boundary as the weight.
  22. ♥♥♥♥ MaskScoring R-CNN [[CVPR19](#)][[CODE](#)] : add third branch for Mask R-CNN for maskROI prediction
  23. Elastic Boundary Projection for 3D Medical Imaging Segmentation [[CVPR19](#)][[CODE](#)]: boundary regression to segment 3 D objects through 2D boundary.
  24. Dual Attention Network for Scene Segmentation [[CVPR2019](#)][[CODE](#)]: spacial and channel attention.
  25. Devil is in the edges: learning semantic boundaries from noisy annotation [[CVPR19](#)][[CODE](#)]:

## Multi-task learning

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1. Weakly-Supervised Simultaneous Evidence Identification and Segmentation for Automated Glaucoma Diagnosis [[AAAI19](#)]: weakly supervised

2. Branched Multi-Task Networks: Deciding What Layers To Share [[paper](#)] [[code](#)]: tree-like network, share features according to their feature usefulness.
3. Multi-Index Optic Disc Quantification via MultiTask Ensemble Learning [[MICCAI19](#)]