

Method Description for the Potsdam 2D Semantic Labeling Contest

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In this work, we use ResNet101 as our baseline model. To classify small objects such as cars, we employed atrous convolution for dense feature extraction and field-of-view enlargement, which is inspired by DeepLab.

During training, we only use the RGB images of Potsdam offered by the organizer, no any other data. We perform multi-scale and flipped patches as data augmentation to get more information from the original images. Also, we use “poly” learning strategy for training rather than fixed learning rate.

Reference:

Chen L C, Papandreou G, Kokkinos I, et al. DeepLab: Semantic Image Segmentation with Deep Convolutional Nets, Atrous Convolution, and Fully Connected CRFs.[J]. IEEE Transactions on Pattern Analysis & Machine Intelligence, 2016, PP(99):1-1.

Long J, Shelhamer E, Darrell T. Fully convolutional networks for semantic segmentation[C]// Computer Vision and Pattern Recognition. IEEE, 2015:3431-3440.