

ABSTRACT

SEMANTIC IMAGE SEGMENTATION METHODS AND SYSTEMS

Semantic image segmentation methods and systems are described. In an embodiment a semantic image segmentation method of segmenting a target image is provided. The method comprises: receiving a source image and pixel labels for the source image, the pixel labels for the source image indicating, for each respective pixel of the source image, a class from a plurality of classes; training a feature extractor to extract image features from the source image and from the target image, training a pixel scale classifier to classify pixel scale features of the source image and the target image and training a local scale contextual relation classifier to classify local scale image contextual relation features of the source image and the target image and thereby obtaining a trained feature extractor, a trained pixel scale classifier and a trained local scale contextual relation classifier, wherein training the feature extractor, training the pixel scale classifier and training the local scale classifier is carried out while aligning domain shift on a pixel scale, a local scale and a global scale between a domain of the source image and a domain of the target image; and using the trained feature extractor, the trained pixel scale classifier and the trained local scale contextual relation classifier to generate pixel labels for the target image.

[FIG.3 to be printed with Abstract]