

RECOGNIZING A PLACE AND OBJECT BY USING CNN

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Object recognition is one of the most challenging tasks in the field of computer vision. Convolutional neural network is used in this paper, for image recognition and classification. It is used for identifying objects in the given image. Convolutional neural network based COSFIRE filters is used for place and object recognition for an image. We propose a method called COSFIRE filter. It is an effective method for detecting and localizing visible patterns. The limitation of COSFIRE filter so far was the use of Gabor filter for the configuration of COSFIRE filter. In difference to convolutional neural network, this form of filter can be configured by presenting single training example and it can be implemented on image of any size. This form of filter can be arranged consequently by displaying a single model in training the dataset. The dataset used for place recognition is country dataset. It will find the region of an image in the dataset, particularly famous places. For object recognition we take single image and identify objects in the image. A more broader class is used for contributing filter, particularly filter described via intermediate CNN representation. The technique outperforms CNN baseline approach wherein the full CNN representation at a certain layer is used as input to an SVM classifier. In addition, it also outperforms non-CNN strategies. In case of object recognition, the approach performs NETVLAD at the same time, only one reference image is used to identify objects and also it will predict the accuracy of an image.