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An Unsupervised Object Localization Based on Topological Data Analysis

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Hong Cheng All Authors ...

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Abstract



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Abstract:

In this paper, an unsupervised object localization based on topological image processing is proposed to deal with image localization problem. We use the method to process images with the intention to identify the objects of interest and draw bounding boxes to surrounding the objects in the images. We experiment with a dataset with 200 bird species of 11788 annotated images. Our results show in average 72.41% of our predicted bounding boxes are overlapped with annotated bounding boxes.

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I. Introduction

Image localization is a spin-off of regular CNN-vision algorithms. Instead of predicting classes, image localization algorithms predict a [Signal for Continuous Readings](#), namely, x coordinate, y coordinate, width, and height, to draw a bounding box around an object of interest.

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