DANet: Divergent Activation for Weakly Supervised Object Localization

Haolan Xue†, Chang Liu†, Fang Wan†, Jianbin Jiao†, Xiangyang Ji‡ and Qixiang Ye†‡

†University of Chinese Academy of Sciences, Beijing, China
‡Tsinghua University, Beijing, China. ‡Peng Cheng Laboratory, Shenzhen, China
{xuehaolan17,liuchang615,wanfang13}@mails.ucas.ac.cn, xyji@tsinghua.edu.cn
{jiaojb,qxye}@ucas.ac.cn,

Figure 1: Compared with the CAM method, the proposed DANet tends to localize larger object extent (ground-truth bounding boxes are in yellow and the predicted are in red).
Figure 2: Evolution of the activation maps during training on ILSVRC validation set. Along with the learning procedure, the activated regions diverge to full object extent. Red boxes in the last column denote the localization results. (Best viewed in color)
Figure 3: Activation maps and bounding box localization results of DANet on the CUB-200-2011 test set.

Figure 4: Activation maps and bounding box localization results of DANet on the ILSVRC validation set.