Report 4

CSE541 Computer Vision Section-1

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Comparison of QueryDet with RetinaNet:

Method	AP[%]
QueryDet	33.91
RetinaNet	33.95

Reference: Author links open overlay panel Onur Can Koyun a et al., “Focus-and-detect: A small object detection framework for aerial images,” Signal Processing: Image Communication, https://www.sciencedirect.com/science/article/pii/S0923596522000273 (accessed Apr. 8, 2024).

>>> From the paper “Focus and detect: A small object detection framework for aerial images”, we can compare QueryDet with the RetinaNet model in terms of AP values. For QueryDet, AP[%] is 33.91 and for RetinaNet, AP[%] is 33.95. So we came to the conclusion that RetinaNet will provide better results for small object detection than QueryDet, so we implemented and tested RetinaNet on the Visdrone-2019 dataset for small object detection.

Results of RetinaNet:

>>> Results of RetinaNet on the Visdrone-2019 dataset, clearly show that it can only identify the objects which are not occluded or truncated. And it is not very efficient in identifying the small objects accurately.

Future work:

>>> RetinaNet's low efficiency needs to be improved. So we will try to improve its results and try to implement other more efficient models.