

A prior feature enhanced network for small objects detection and tracking

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Abstract

Object detection is an important computer vision task. It used to detect instances of visual objects of certain classes in digital images such as photo or video frames. Nowadays, with the development of deep learning and the computing power of GPU's, the performance of object detection has greatly improved. Nonetheless, how to detect and track small objects in complex video backgrounds is a thorny problem. That's what brings us here, delivering a useful preprocessing layer for detecting few pixel objects (drone) under complex background before using a simple and strong tracker, named ByteTrack, by equipping the high performance detector YOLOX.

Keywords: UAV, Object detection, YOLOX, ByteTrack, Reynolds Transport
Theorem