

Asymmetric Object-Background Latent Pretraining for Domain Adaptation

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Abstract

This article addresses the question of the consistency of unmanned aerial vehicle (UAV) detection under a strong change of environment. It presents a self-supervised pretraining strategy, applied to a state-of-the-art one-stage object detector, that decouples the learning of the objects of interest from the learning of the background. This greatly improves the detection of UAVs on urban backgrounds while requiring only rural UAV datasets.

Keywords

Computer vision, domain adaptation, object detection.