SkyPro

VADUM

Data Augmentation for Rapid Automatic Target Recognition

SkyPro is an AI solution for automatic overhead image generation and object detection. The solution does not use synthetic data or require manual annotation, outperforming existing solutions in cost, speed and accuracy. Rare objects are seamlessly placed into any context providing endless image variety. The result is an augmented dataset for significant reduction in Automatic Target Recognition deployment cost and time.
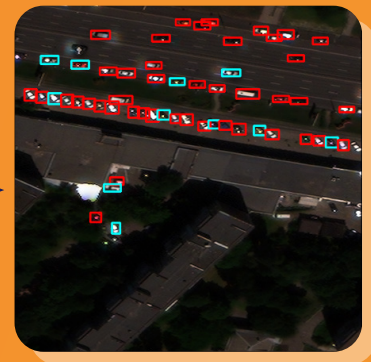
VALUE	SkyPro	Others
Entry Barrier	Provide an example image, start today	Time-consuming human labelers or 3D object models
Sim-to-Real Gap	Utilizing real examples avoids sim-to-real gap	Rendered images cannot capture real-world quality
Speed	Orders-of-magnitude faster via automation	Heavyweight CAD models and human-in-the-loop
Accuracy	Up to 20% boost in performance over rendered data	Limits on real-world data

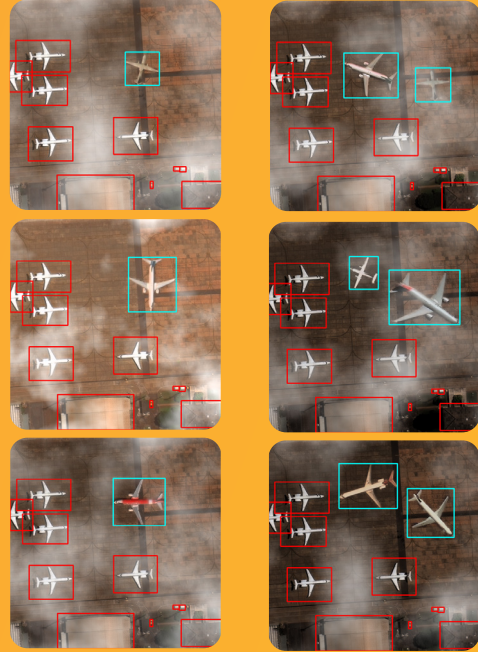## Overhead Image Augmentation and Analysis

Unlabeled Aerial Image Database

Labeled Aerial Image Database

Improved ATR
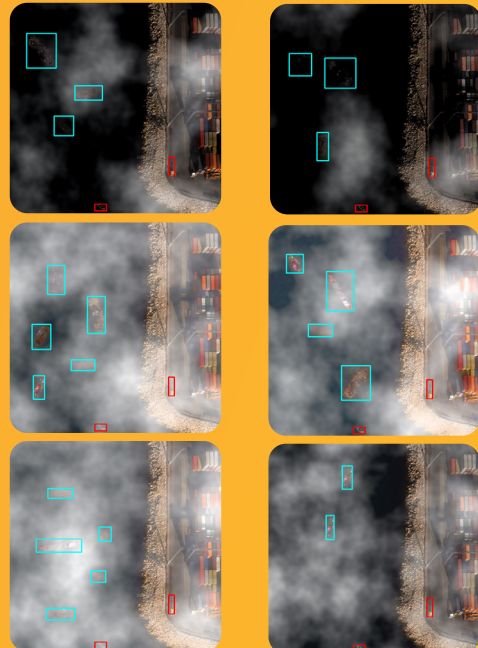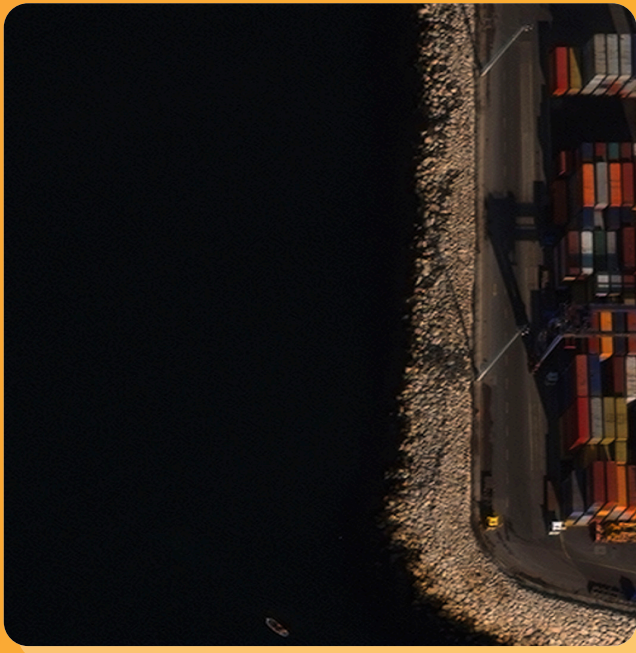

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AUGMENTATION

DETECTION

Significant reduction in object time-to-detect for Automatic Target Recognition

Examples

Augmentation ■ Detection

Sky**Pro Place New Objects and Detect Existing Objects**

Augmentation ■ Detection