

Dataset

The *Man OverBoard Drone (MOBDrone)* dataset is a large-scale collection of aerial footage images. It contains 126,170 frames extracted from 66 video clips gathered from one UAV flying at an altitude of 10 to 60 meters above the mean sea level. Images are manually annotated with more than 180K bounding boxes localizing objects belonging to 5 categories --- *person, boat, lifebuoy, surfboard, wood*. More than 113K of these bounding boxes belong to the *person* category and localize people in the water simulating the need to be rescued.

In this repository, we provide:

- 66 Full HD video clips (total size: 5.08 GB)
- 126,170 images extracted from the videos at a rate of 30 FPS (total size: 176 GB)
- 3 annotation files for the extracted images that follow the MS COCO data format (for more info see <https://cocodataset.org/#format-data>):
 - `annotations_5_custom_classes.json`: this file contains annotations concerning all five categories; please note that class ids do not correspond with the ones provided by the MS COCO standard since we account for two new classes not previously considered in the MS COCO dataset --- *lifebuoy and wood*
 - `annotations_3_coco_classes.json`: this file contains annotations concerning the three classes also accounted by the MS COCO dataset --- *person, boat, surfboard*. Class ids correspond with the ones provided by the MS COCO standard.
 - `annotations_person_coco_classes.json`: this file contains annotations concerning only the '*person*' class. Class id corresponds to the one provided by the MS COCO standard.

For convenience, images extracted from videos can be downloaded at the following link: <http://aimh.isti.cnr.it/dataset/MOBDrone>.

The *MOBDrone* dataset is intended as a test data benchmark. However, for researchers interested in using our data also for training purposes, we provide training and test splits:

- *Test set*: All the images whose filename starts with "DJI_0804" (total: 37,604 images)
- *Training set*: All the images whose filename starts with "DJI_0915" (total: 88,568 images)

The code to reproduce our results is available at this GitHub Repository:

https://github.com/ciampluca/MOBDrone_eval

Contact Information

If you would like further information about the MOBDrone or if you experience any issues downloading files, please contact us at [mobdrone\[at\]isti.cnr.it](mailto:mobdrone[at]isti.cnr.it)