Set up the Mark\_RCNN project

# step one

Download the original project from the github: <https://github.com/aiknightsadmin/Roof-Storm-Damage-Detection>

## Installation

1. Clone this repository：<https://github.com/aiknightsadmin/Roof-Storm-Damage-Detection>
2. Install dependencies

pip3 install -r requirements.txt

1. Run setup from the repository root directory

python3 setup.py install

# create .json file

Use this website to create .json file: <http://www.robots.ox.ac.uk/~vgg/software/via/via.html>

# set up your own datasets

Create a folder in the root of the project named “dataset” and put your pictures and json files in the sub-folder “train” of the “datasets”

# train your programe

To train your program to get the Forecasting Weights and Model

**Command：**

*#Train a new model starting from pre-trained COCO weights  
python hail.py train --dataset=/home/.../mask\_rcnn/data/hail/ --weights=coco*

*#Train a new model starting from pre-trained ImageNet weights  
python3 hail.py train --dataset=/Users/yhuang24/Project/Data/Hail --weights=imagenet*

*# Continue training the last model you trained. This will find  
# the last trained weights in the model directory.  
python3 hail.py train --dataset=/Users/yhuang24/Project/Data/Hail --weights=last*

# select best model

Using Tensorboard to do data visualization and select best case (best training step) as new Weights and Model

**Tensorboard usage：**

<https://www.tensorflow.org/tensorboard/migrate>

# Use “detect” function to predict results

Using “detect” function to predict and show results of accuracy, and save predicted pictures in folder.

**Command：**

*#Detect and color splash on a image with the last model you trained.  
#This will find the last trained weights in the model directory.  
python3 hailV3.py detect --weights=last --image=*

**Batch detection**

python HailV3.py detect --dataset=dataset --weights=mask\_rcnn\_hail\_0124.h5 --subset=dataset/train