

# Image Tagging

## Sloth

---

### Setup

In order to tag images, we use a piece of software called Sloth. To install it from the robosub debian repository, run the following command:

```
sudo aptitude install sloth
```

---

### Using Sloth

To use sloth and start tagging images, you can run the following command.

```
sloth -c /path/to/vision_dev/sloth/robosub_config.py  
/path/to/annotation/file
```

`*-c*` Is a flag to give the path to a configuration file. This file is provided in the vision\_dev/sloth directory. The path you provide should point to this file.

The last argument is a path to an annotation file. This is most likely named something like ``labels.json``. You will need to provide this path in order to tag images.

Should you find this tedious, there is a script in the sloth directory of the vision\_dev repository which performs some of this for you. It can be used as follows:

```
./robosub_sloth.sh /path/to/annotation/file
```

This removes the need to add the `-c` flag repeatedly. This script can also be symlinked to without issues.

---

### Sloth Keybindings

The full list of keybindings used in sloth can be found in the [robosub\\_config.py](#) file near the bottom. A shorthand list is provided below

#### Default keybindings

- **Space** Mark image as labeled/confirmed and go to next

- **Backspace** Next image/frame
- **PgDown** Previous image/frame
- **PgUp** Previous image/frame
- **Tab** Select next annotation
- **Shift+Tab** Select previous annotation
- **Ctrl+f** Fit current image/frame into window
- **Del** Delete selected annotations
- **Esc** Exit insert mode
- **Shift+l** Mark current image as labeled
- **Shift+c** Mark all annotations in image as confirmed

## **Robosub Specific**

- **F5** Toggle the visibility of label names on annotation boxes
- **Ctrl+Shift+Del** Delete all annotations from the current image and mark it as unlabeled
- **C** Copy all annotations from the previous image to this one
- **n** Mark image as labeled/confirmed and copy annotations to next image.  
(Equivalent to **Space** then **c**)

## **Annotations**

- **s** Start Gate Post
- **p** Path Marker
- **t** Torpedo Target
- **1** Die 1
- **2** Die 2
- **3** Die 3
- **4** Die 4
- **5** Die 5
- **6** Die 6

---

## **Sloth Mouse Controls**

While creating annotations, the following are useful mouse controls.

- **Right Click and Drag**

Resize an annotation. Resizing is based upon the quadrant of the annotation clicked on.

- **Ctrl+Left Click**

Select multiple annotations at once.

# Data Management

First check if your default python is of version 2.7, and that your pip is for 2.7. To do so run

```
python -V
pip -V
```

The output should be python 2.7.x, the version must not be 3.5. For pip it will be pip x.y.z from /usr/lib/python2.7/dist-package (python2.7). If it says that you have pip for python3.5 then you need to purge all versions of pip, and reinstall each.

If you do not have pip installed, run

```
sudo apt-get install python-pip
```

After pip is installed properly, you need to install setup\_tools and pysftp library for python, to do so run

```
sudo pip install --upgrade pip
sudo pip install --upgrade pip setuptools
sudo pip install pysftp
```

Getting, validating, and returning labeling data is handled through the `rslabel` utility program. To install it, run

```
sudo pip install rslabel --extra-index-url
http://robosub.eecs.wsu.edu/python_repo/ --trusted-host robosub.eecs.wsu.edu
```

There are a number of commands to be used with rslabel, including show, get, return, upload, and collect.

Command	Description
rslabel show	Provides information about the number of datasets labeled, number of images properly validated, and counts any labeling sessions in progress.
rslabel get	Grabs an image dataset for labeling and places it in your current directory. The --validation flag can be supplied to get labeled data to validate.
rslabel return [JSON]	Returns a dataset to the server. If the data has not been completely labeled or validated, it will be returned for someone else to complete in the future.
rslabel upload [ROSBAG]	Takes a ROS bag file and break the images out into datasets for labeling. It will then upload the files to the server for labeling.
rslabel collect	Collects all of the labeled and validated images into a single dataset for use with object detection training.

From:  
<https://robosub.eecs.wsu.edu/wiki/> - Palouse RoboSub Technical Documentation

Permanent link:  
[https://robosub.eecs.wsu.edu/wiki/cs/vision/image\\_tagging/start?rev=1520285064](https://robosub.eecs.wsu.edu/wiki/cs/vision/image_tagging/start?rev=1520285064)

Last update: 2018/03/05 13:24



