

# Training YOLO v3 for Objects Detection with Custom Data

## *Installing LabelIMG*



## Useful resource for labelling

### Criteria:

- ease of use
- free to use
- supports bounding boxes

### LabelIMG

- easy to install on **Linux / Windows / Mac**
- **bulk upload** of images
- upload annotations and correct them
- user friendly **off-line interface**
- saving results directly into **YOLO format**

### Installing LabelIMG

The installation process is very simple and takes few minutes. Anyway, if you encounter any issues with installation *LabelIMG*, let's discuss them in *Question & Answer* board. Together with course-mates we will find solution.

Let's consider few examples on how to install *LabelIMG* from [official repository](#).

## PyPI

The **easiest way** to install *LabelIMG* is by using *pip*. Activate your *Python v3* environment and run following command in *Terminal* (or *Anaconda Prompt*):

```
pip3 install labelimg
```

or:

```
pip install labelimg
```

To launch:

```
labelimg
```

Other commands to install *LabelIMG* are listed below.

## Linux Ubuntu

Activate your *Python v3* environment and run following commands in *Terminal*:

```
sudo apt-get install pyqt5-dev-tools
```

```
sudo pip3 install pyqt5==5.10.1
```

```
sudo pip3 install lxml==4.2.4
```

```
make qt5py3
```

or:

```
sudo apt-get install pyqt5-dev-tools
```

```
sudo pip install pyqt5==5.10.1
```

```
sudo pip install lxml==4.2.4
```

```
make qt5py3
```

To launch:

```
python3 labelimg.py
```

or:

```
python labelimg.py
```

## Windows

*Option 1.* Follow next few steps on how to install *LabelIMG* on Windows.

- Download and install *Anaconda* for *Python v3* from [official resource](#).
- Download and extract zip file with *LabelImg* tool from [official repository](#) into new folder with name *labelimg* into the Disc (C:).
- Open *Anaconda Prompt* and go to the *labelimg* directory and type in:

```
pyrcc5 -o libs/resources.py resources.qrc
```

- To launch:

```
python3 labelImg.py
```

or:

```
python labelImg.py
```

*Option 2.* Try out another set of commands to install *LabelIMG* on Windows.

- Download and install *Anaconda* for *Python v3* from [official resource](#).
- Download and extract zip file with *LabelImg* tool from [official repository](#) into new folder with name *labelimg* into the Disc (C:).
- Open *Anaconda Prompt* and go to the *labelimg* directory and type in:

```
conda install pyqt=5
```

```
conda install -c anaconda lxml
```

```
pyrcc5 -o libs/resources.py resources.qrc
```

- To launch:

```
python3 labelImg.py
```

or:

```
python labelImg.py
```

## Mac

Follow next few steps on how to install *LabelIMG* on Mac.

**Homebrew.** The easiest way to install *LabelIMG* tool on Mac is with Homebrew. If you don't have Homebrew installed, use following command in *Terminal* (zoom in and copy-paste):

```
/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

Once Homebrew is installed type in *Terminal* following:

```
brew install qt
```

```
brew install libxml2
```

```
make qt5py3
```

To launch:

```
python3 labelImg.py
```

or:

```
python labelImg.py
```

**Pip.** Or, it is possible to use *pip*. Type in following commands in *Terminal*:

```
pip3 install pyqt5 lxml
```

```
make qt5py3
```

or:

```
pip install pyqt5 lxml
```

```
make qt5py3
```

To launch:

```
python3 labelImg.py
```

or:

```
python labelImg.py
```

## Hot-keys

Ctrl + u	Load all of the images from a directory
Ctrl + r	Change the default annotation target directory
Ctrl + s	Save
Ctrl + d	Copy the current label and rectangle box
Space	Flag the current image as verified
w	Create a rectangle box
d	Next image
a	Previous image
del	Delete the selected rectangle box
Ctrl++	Zoom in
Ctrl--	Zoom out
↑→↓←	Keyboard arrows to move selected rectangle box

## Useful Links

Check out additional links with other useful and free resources for data labelling that you might find great for your future work:

[1] [LabelIMG](#) – desktop, **chosen for this course**, annotations in **YOLO format**

- [2] [VGG Image Annotator](#) – web-based, annotations in JSON or CSV file
- [3] [supervise.ly](#) – web-based, advanced options, variety of formats
- [4] [CVAT](#) – web-based, supports video, annotations in YOLO and other formats
- [5] [OpenLabeler](#) – desktop, annotations in Pascal VOC format in XML file
- [6] [RectLabel](#) – desktop, Mac application, annotations in YOLO and other formats
- [7] [imglab](#) – web based, annotations in Pascal VOC and other formats