

How to train a model with Roboflows YOLOv5 notebook and your own dataset

The provided Colab notebook in these instructions was originally created by Roboflow¹ and edited by Anni Johansson. It uses the YOLOv5x training algorithm.

- Create a dataset according to the YOLOv5 format.

Create a folder containing:

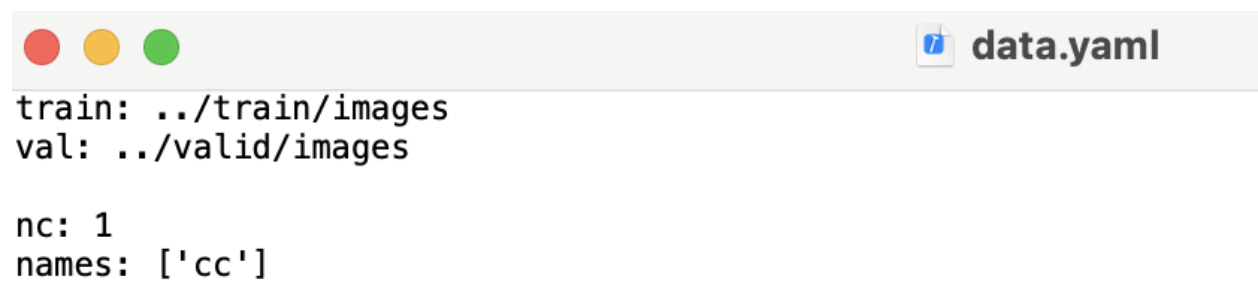
- The yaml file named data.yaml according to image 1 below
- A folder named “train” including:
 - A folder named “images” including about 70% of your images
 - A folder named “labels” including annotation files (.txt format) for all of these images following the YOLO format ², named as its corresponding image
- A folder named “test” including:
 - A folder named “images” including about 20% of your images
 - A folder named “labels” including annotation files (.txt format) for all of these images following the YOLO format, named as its corresponding image
- A folder named “valid” including:
 - A folder named “images” including about 10% of your images
 - A folder named “labels” including annotation files (.txt format) for all of these images following the YOLO format, named as its corresponding image
- Make sure that all images include bounding boxes! Empty annotation files (corresponding to images without bounding boxes) will be a problem when being uploaded to the Colab notebook
- Open the following Colab notebook and make a copy of it:
<https://colab.research.google.com/drive/1oKnxaYo5ppRMFurHB-kdzS7T1k43EqBv?usp=sharing>

¹ <https://roboflow.com/> (visited 6th of December 2021)

² <https://blog.paperspace.com/train-yolov5-custom-data/> (visited 6th of December 2021)

- Run the first five code cells
- Add your own train, test and valid folders into the folder of files in the Colab notebook (according to image number 2 below)
- Add the data.yaml file inside the yolov5 folder (according to image number 3 below)
- Run the following code cells
- Use the last two cells in order to export the trained weights to you Google Drive

Images



```
train: ../train/images
val: ../valid/images

nc: 1
names: ['cc']
```

Image 1

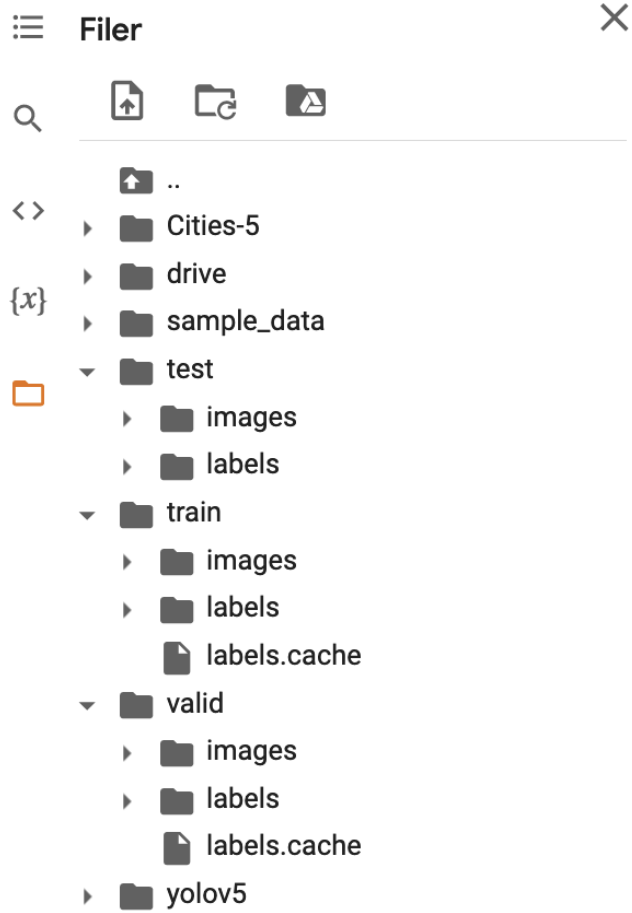


Image 2

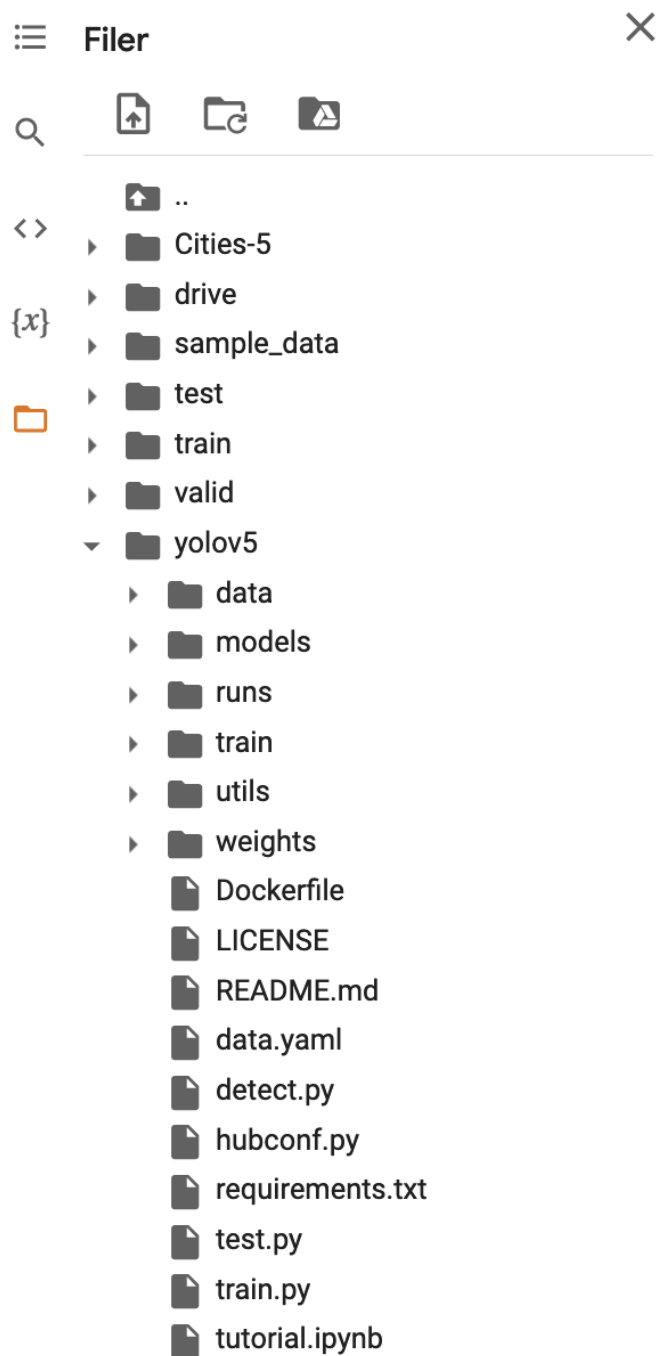


Image 3