Documentation

Steps to install WSL:

1. Open PowerShell (or Windows Command Prompt) and enter: wsl --install
2. Once the process of installing your Linux distribution with WSL is complete, open the distribution (Ubuntu by default) using the Start menu. You will be asked to create a User Name and Password for your Linux distribution.

Steps to install pip on wsl:

1. `sudo apt upgrade`
2. `sudo apt install python3`
3. `sudo apt install python3-pip`

Steps to connect Visual Studio Code to Wsl Terminal:

1. Open Visual Studio Code, install the Remote - WSL extension: Open Visual Studio Code, go to the Extensions view by clicking on the square icon on the left sidebar, and search for "Remote - WSL". Install the "Remote - WSL" extension provided by Microsoft.
2. Then back to Wsl terminal, go to the directory you want to edit your code file. Input command line : “code .”. Then the visual studio code should pop up immediately.

Steps to install roboflow server:

1. pip install roboflow --quiet

Steps to install numpy:

1. `pip install numpy`

Steps to install tkinter:

1. `sudo apt-get install python3-tk`

Steps to install tkinter:

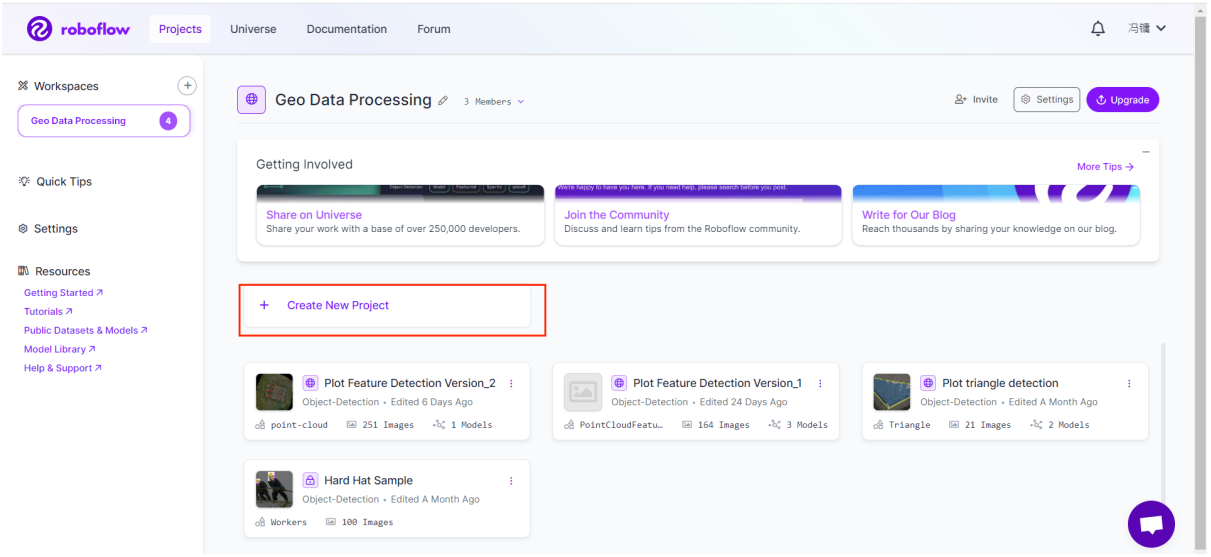
1. `pip install pylas`

If you want to build a stronger or more customized model, you can use below steps to rebuild the program object detection model:

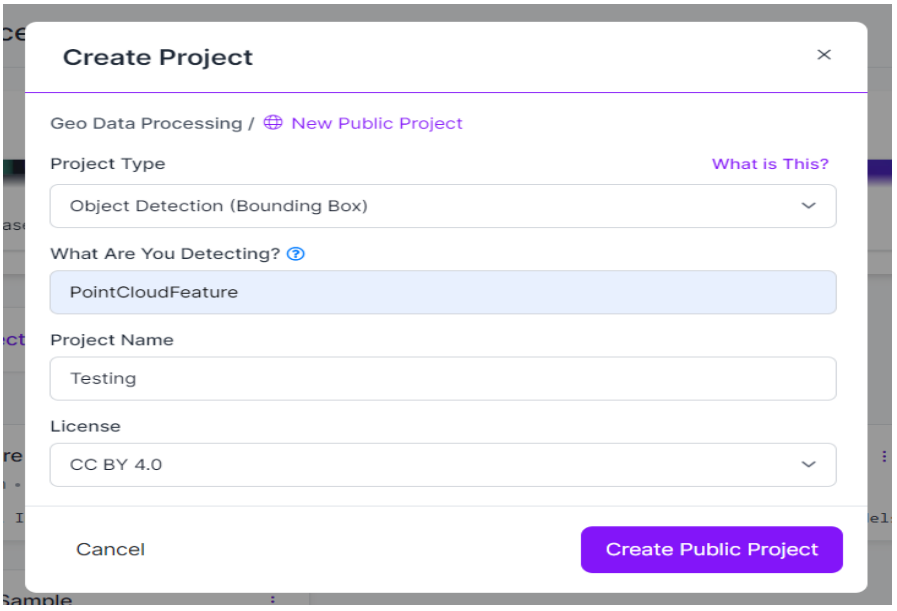
Training Model:

1. Google Roboflow and create your personal account. (https://roboflow.com/)

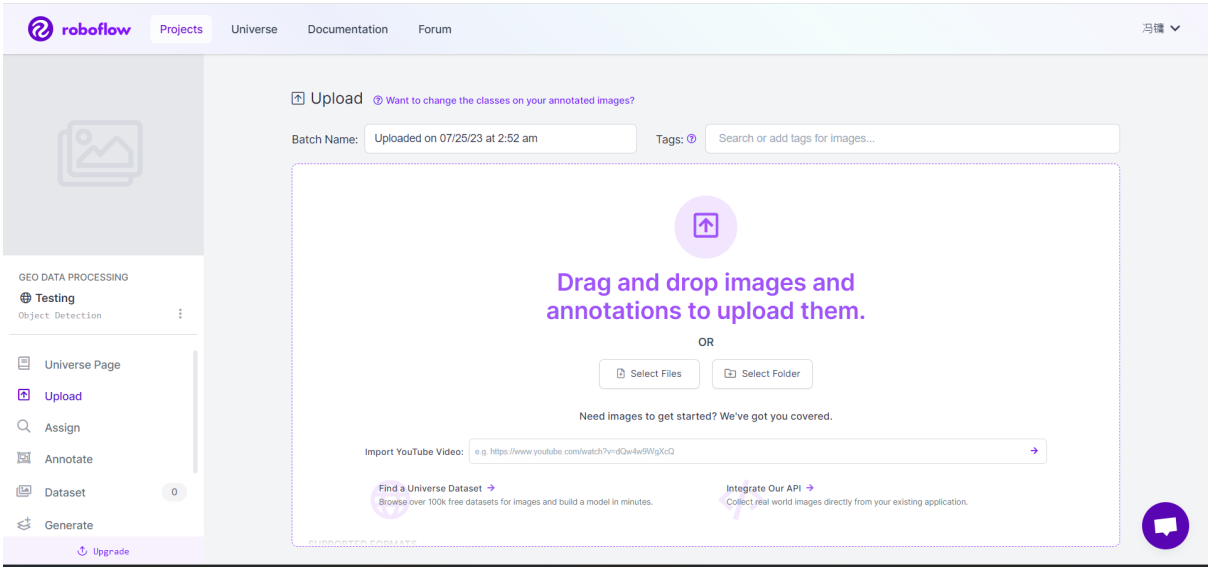
2. Click the Create New Project.



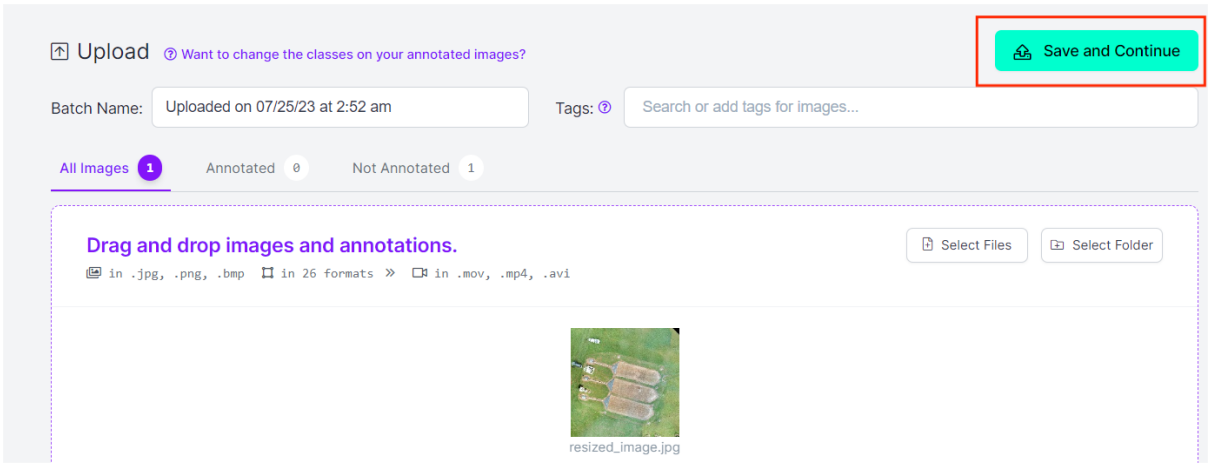
3.Input information about your project. After that click the ‘Create Public Project’ button.



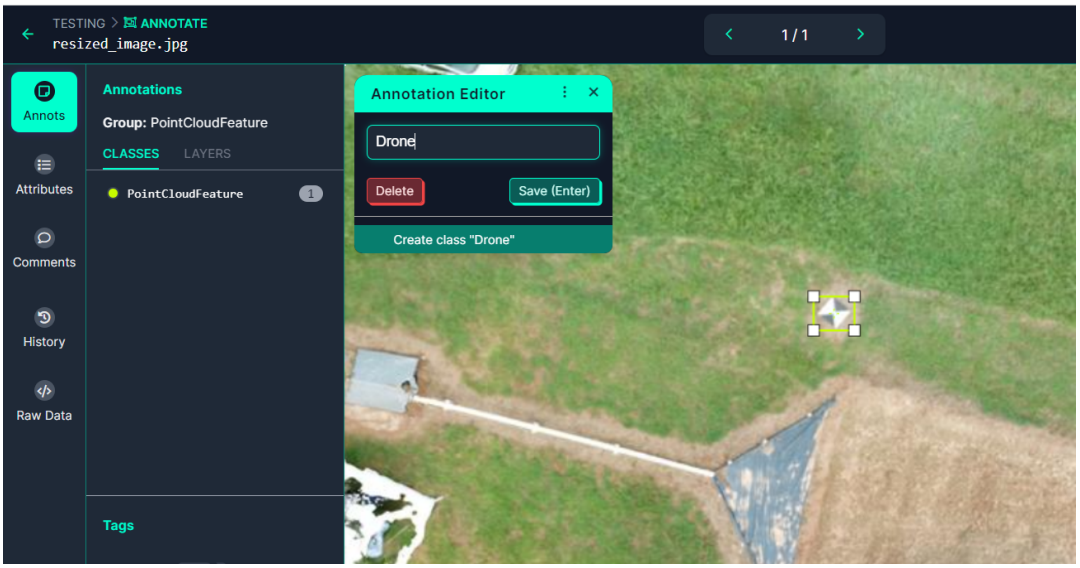
4. Input your dataset.



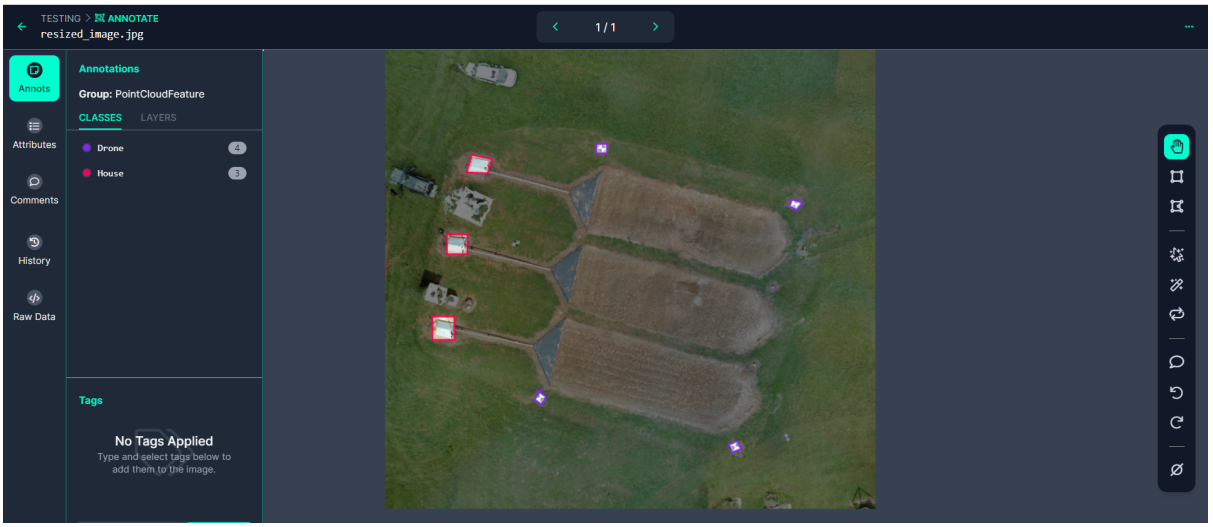
5.Click the ‘Save and Continue’ after the you have uploaded your image



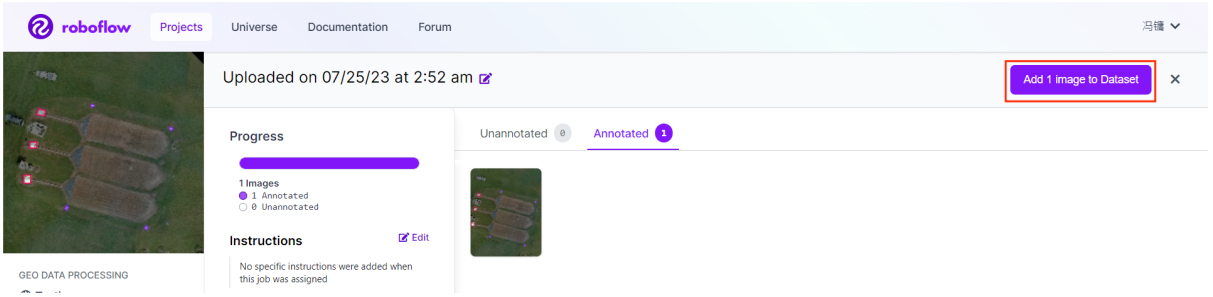
6. Draw bounding box to the object if you want the Model to automatically detect later.



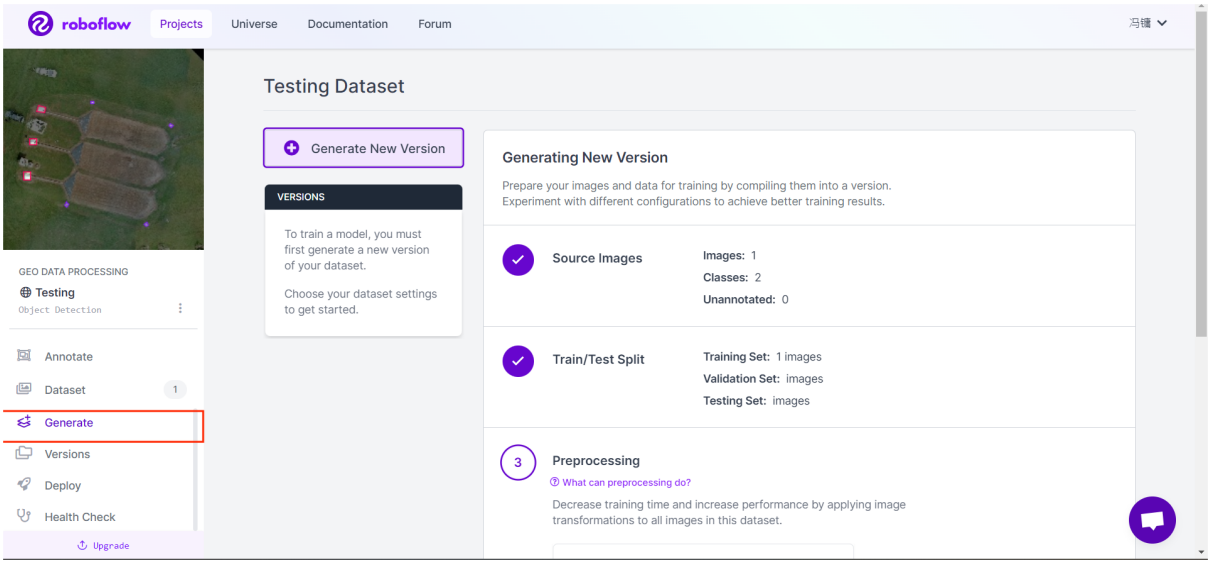
7. After drawing the bounding box, the image will be like this:



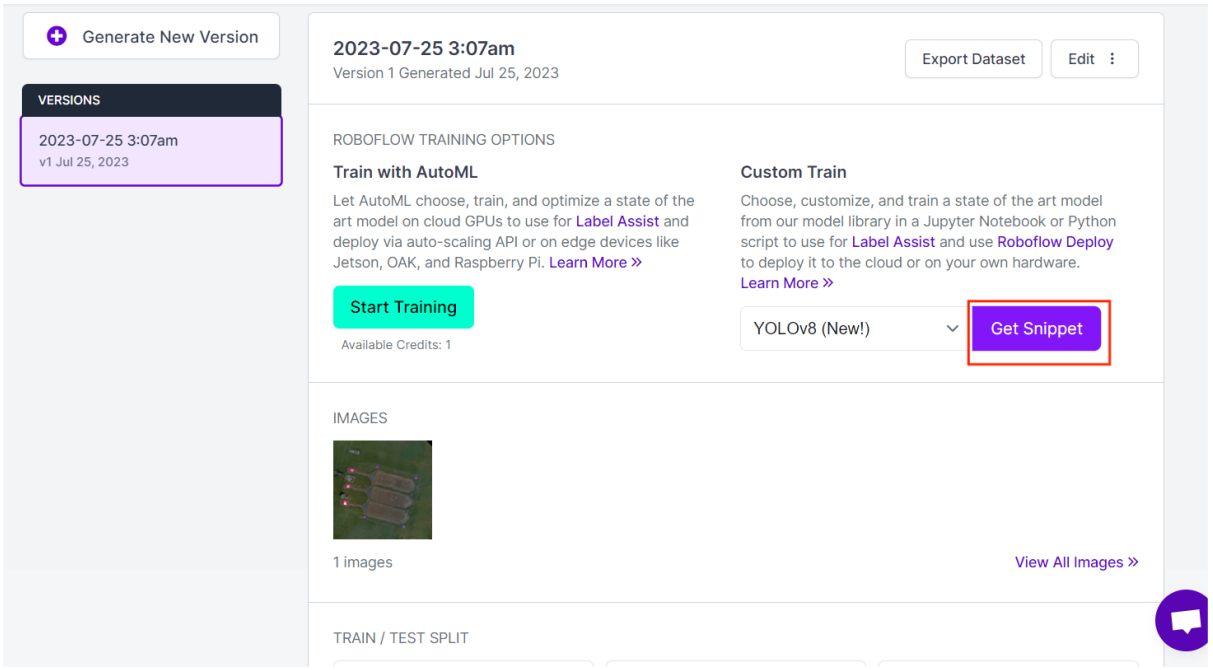
8. After finishing all images, you can click ‘Add Image to Dataset’

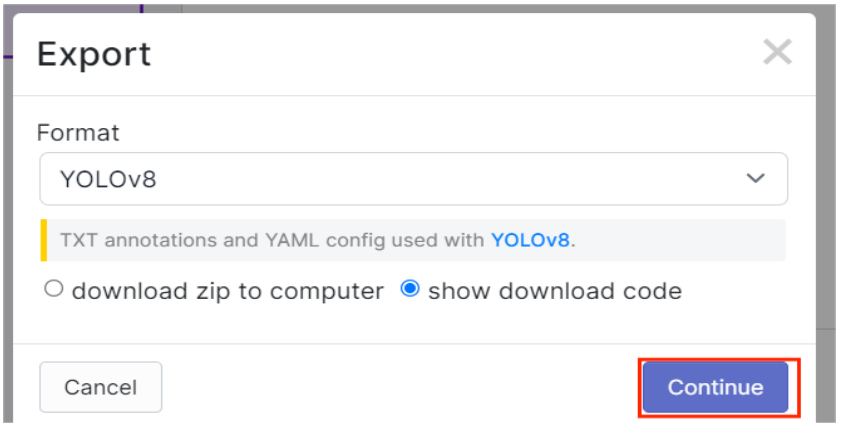


9. Generate your dataset.

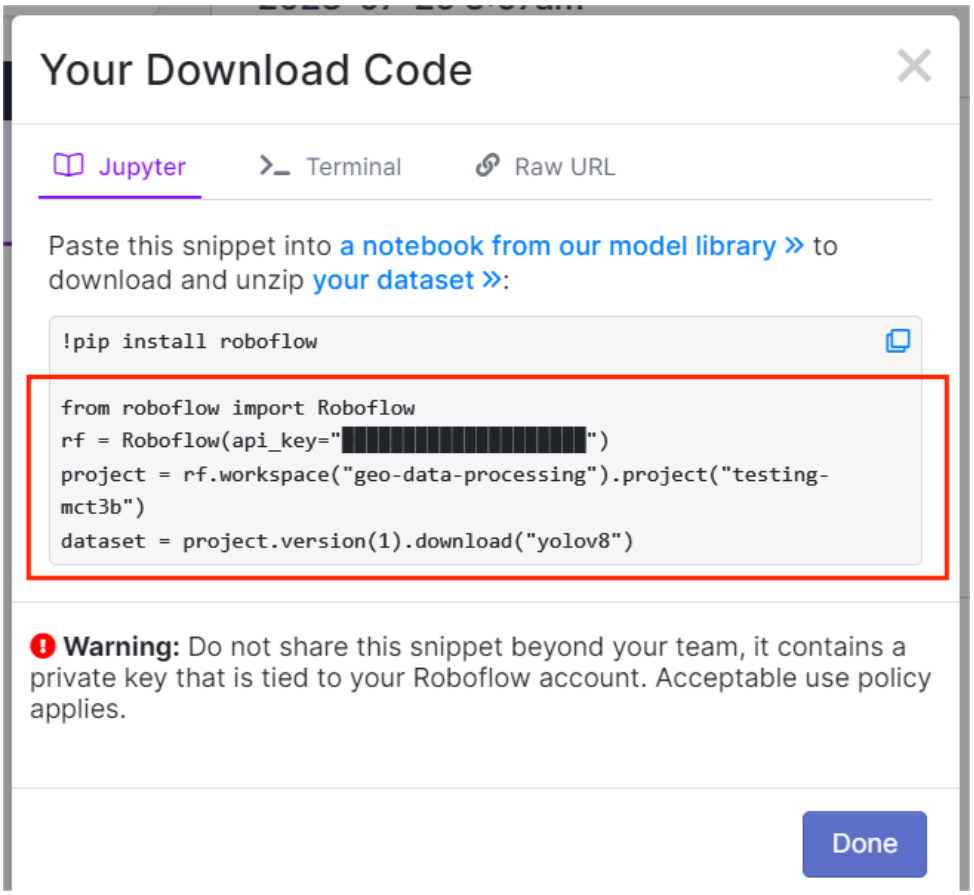


10. Get the link of dataset, in order to train it using google colab.





Copy the code inside the red rectangle



11. Open the Google Colab and copy the code to your own Google Colab script (https://colab.research.google.com/drive/1ghV3ore6JVpzQQ6a1C1BVWG48RXZLi63?usp=sharing)

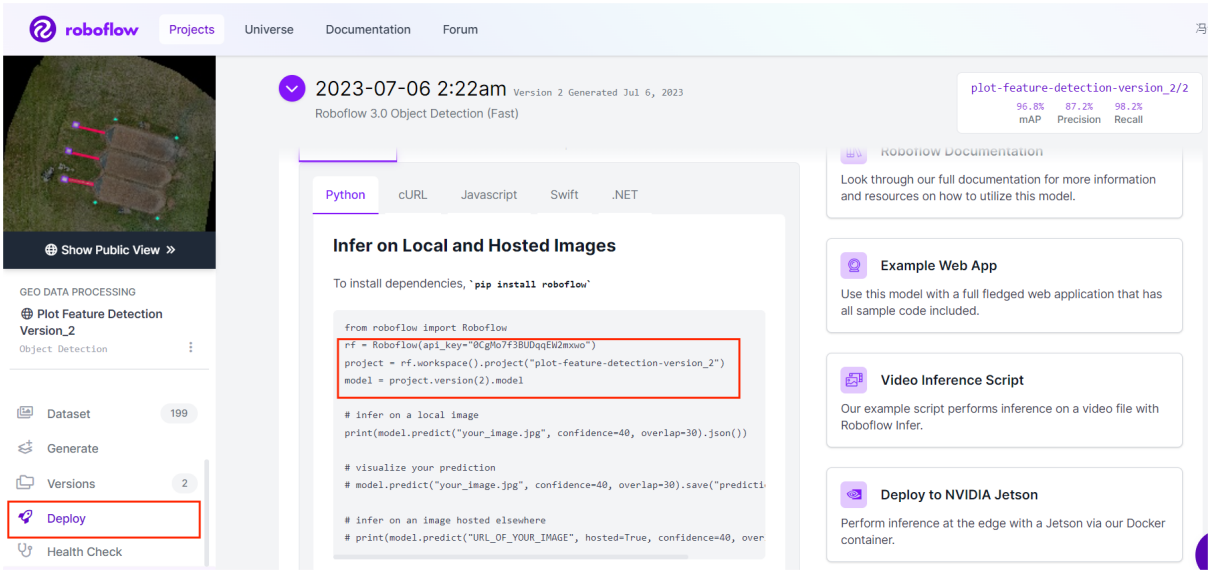
12. Replace this part with your own dataset.

```
[ ] !pip install roboflow --quiet
```

```
from roboflow import Roboflow
rf = Roboflow(api_key="0CgMo7f3BUDqqEW2mxwo")
project = rf.workspace("geo-data-processing").project("plot-feature-detection-version_2")
dataset = project.version(3).download("yolov8")
```

13. Run the whole Google Colab script.

14. After training, you shall see you API Key on the Roboflow website.



15. Copy the API back to the program and replace it with the original code in the Detection Model.

```
image_original_size = crop_center(img, percent)

#Yolo Object Detection Model
rf = Roboflow(api_key="0CgMo7f3BUDqqEW2mxwo")
project = rf.workspace().project("plot-feature-detection-version_2")
model = project.version(2).model
```