This project is developed based on Python 3.9. Therefore, when downloading Python, please ensure its version is >=3.9. You can download Python from this link: https://www.python.org/downloads/ We highly recommend using a Python IDE to run our project. We suggest using PyCharm. You can download it from this link: https://www.jetbrains.com/pycharm/

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## Word Segmentation：

- Use the following commands to install the required libraries
  pip install opencv-python
  pip install roboflow
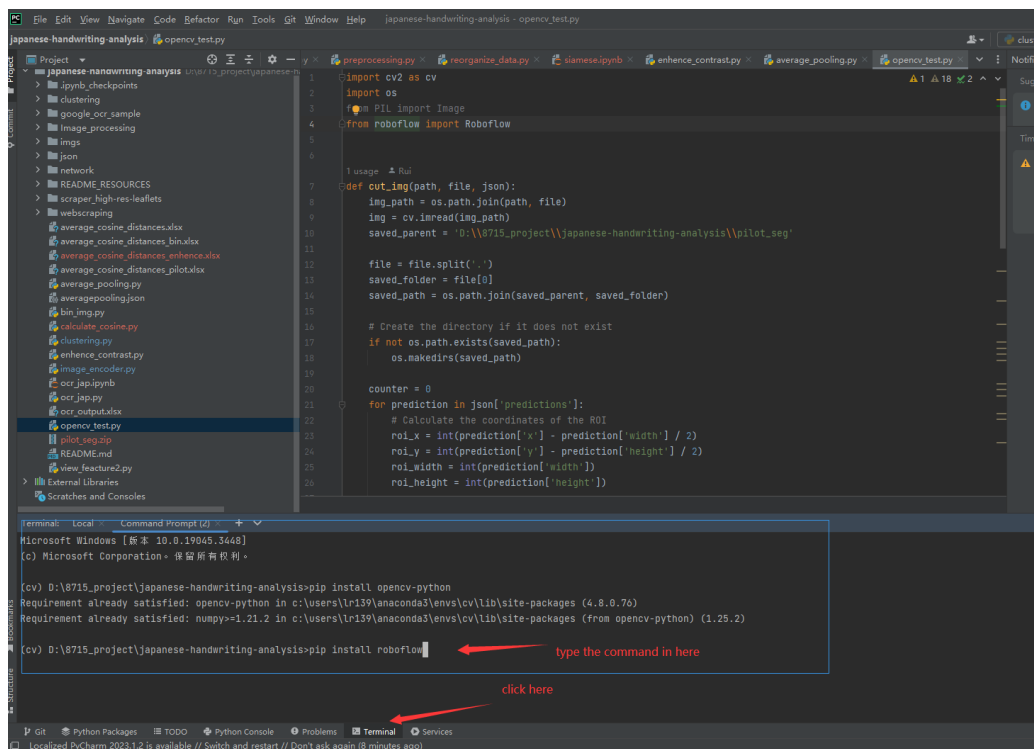


- Open the Word Segmentation.py file. In this file, we will invoke the model from RoboFlow to implement Word Segmentation. What you need to modify are:

  - Line 10's saved_parent: This is the path where the output images will be saved.
  - Line 42's path: This is the path for the input images.
  - Line 36's api key: Refer to the RoboFlow section for this

- The path for the input images should be in the following format:

  -japanese-handwriting-analysis

  ----input_image_folder

  ----------img1.jpg

  ----------img2.jpg

  ----------….jpg

  ----other_folder

----Word_Segmentation.py
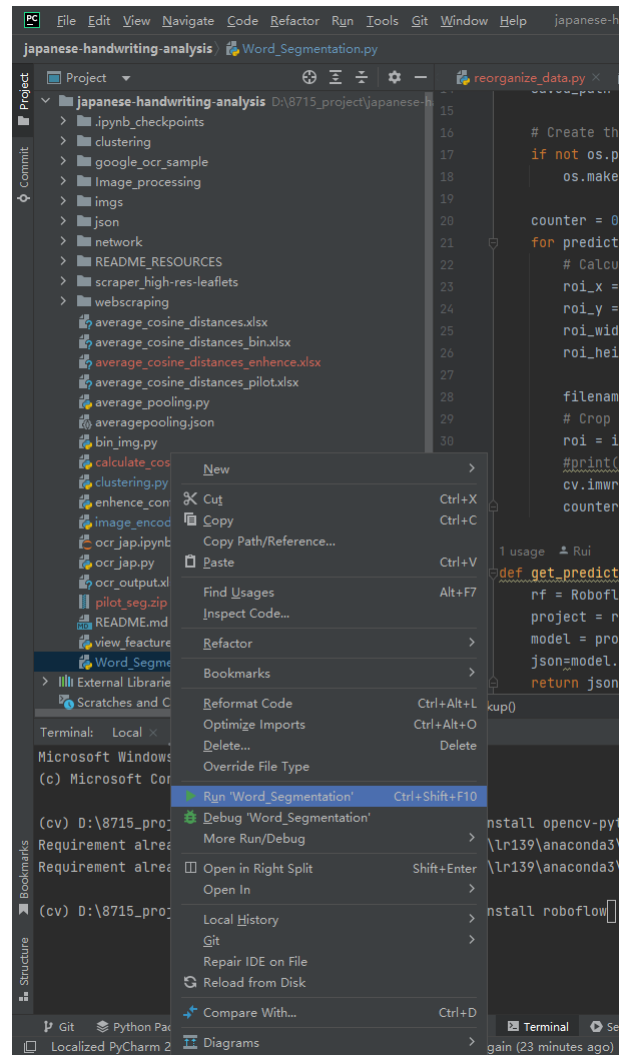


- In the left navigation pane, select the file and right-click, then choose Run

## 2: RobowFlow

RoboFlow offers an integrated platform for annotating data, training models, and deploying models. Our current RoboFlow project is nearing its API call limit. Therefore, you might consider creating a new RoboFlow project and transferring the annotated data into it. The annotated data can be found on Google Drive under the filename 'japan.v5i.yolov8'.

Train model using RobowFlow:
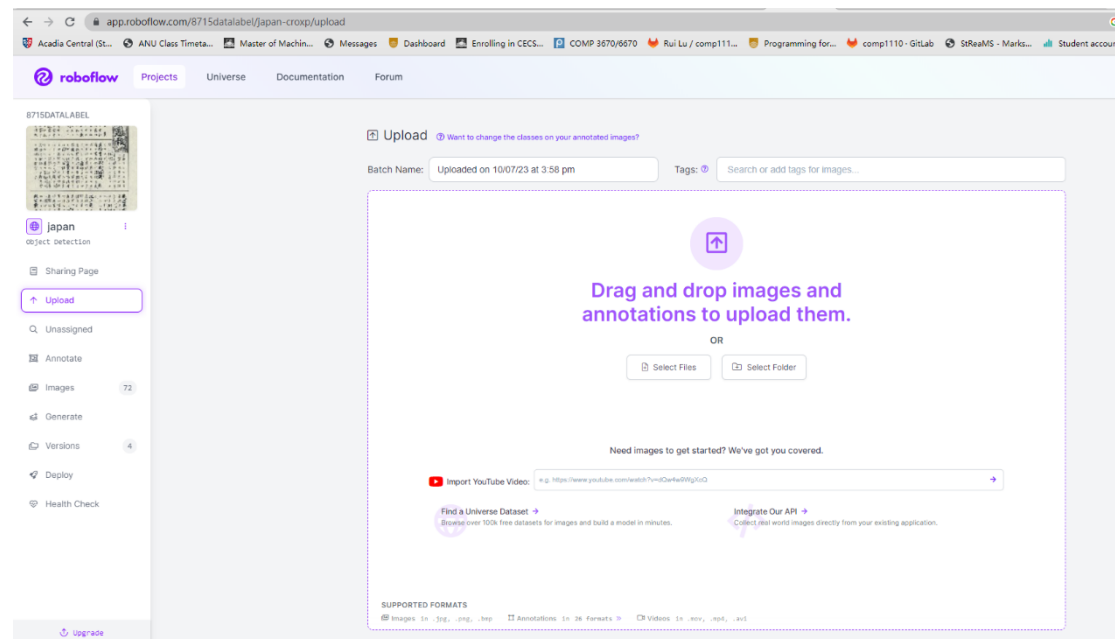


First, open your RoboFlow project, then go to the 'upload' page to upload your dataset
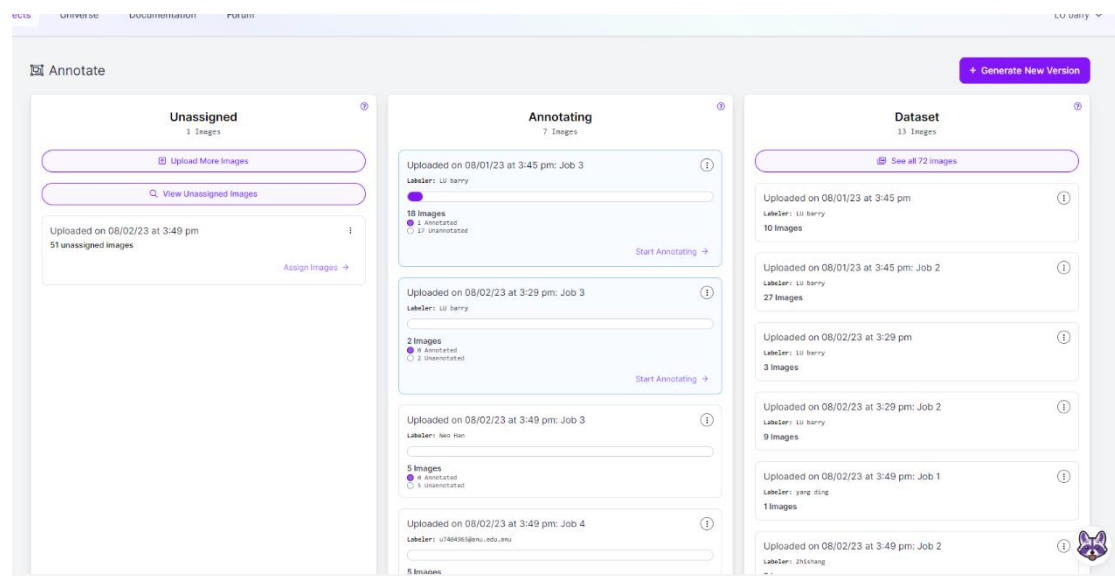


If you want to annotate more data, go to the 'annoted' page. Click on 'assign image' to allocate the images to yourself or your team members. Then, click 'start annotating'. After completing the annotations, click on 'generate new version'.

Follow the instructions on this page, and then you can train your model.



After completing the training, click 'deploy', and you can then invoke your model. You can modify the content in Word Segmentation.py based on the Python code they provide.

# 3: Clustering