RE: YoloV8

Piechaud, Nils <Nils.Piechaud@hi.no>

Mon 2023-10-16 3:11 PM

To:Alexandre Schimel <Alexandre.Schimel@NGU.NO>
Cc:Meyer, Heidi Kristina <heidi.kristina.meyer@hi.no>;Ross, Rebecca <Rebecca.Ross@hi.no>

1 attachments (4 KB)
requirements.txt;

Hi Alex,

Yes, I am using a conda env with python 3.10.11. Ultralytics has only been supported in conda for a few month so I used to install all my modules with pip (conda install created problems with torch).

Anyways, my requirements.txt (attached) is quite bloated and not completely up to date but the one from ultralytics should be a good base for compatibility right?
I don't remember having to change my code after I did a *git pull* (I had some changes in performances and compatibility issues sometimes when updating). I also found that mixing pip and conda installed could create errors.
So I just run:

```
! pip install ultralytics
```

I think, by default, it installs the CPU version of torch so I just use the pip command to upgrade the GPU one:

```
! pip3 install torch torchvision torchaudio --index-url
https://download.pytorch.org/whl/cu117
```

I sometime had to force install/upgrade a library following an error message. This happen with chardet for some reasons…

I haven't tried the conda equivalent but I know they implemented it. If you have done it this way, I am curious to know if it is simpler. Currently my environment works so I adopted the "if it aint broke, don't fix" philosophy. If you think it is best to have the same version of all packages, I can make a fresh one with the latest update. I guess it is due anyway.

Best regards

Nils

From: Alexandre Schimel <Alexandre.Schimel@NGU.NO>
Sent: Wednesday, October 11, 2023 5:13 PM
To: Piechaud, Nils <Nils.Piechaud@hi.no>
Cc: Meyer, Heidi Kristina <heidi.kristina.meyer@hi.no>; Ross, Rebecca <Rebecca.Ross@hi.no>
Subject: Re: YoloV8

Hi Nils,

I am setting up my machine to run Yolo V8.

It would perhaps be a good idea to ensure we are in sync in terms of python version and library dependencies, so our respective code are compatible.

Assuming you are working with a virtual environment, could you send me a file with the list of the requirements? Aka if you are working with conda:

```
conda env export > environment.yml
```

That should also list packages installed with pip.

If you are not using conda but installed packages with pip:

```
pip freeze > requirements.txt
```

Cheers,
Alex

From: Piechaud, Nils <Nils.Piechaud@hi.no>
Sent: Monday, June 19, 2023 1:09 PM
To: Alexandre Schimel <Alexandre.Schimel@NGU.NO>
Cc: Ross, Rebecca <Rebecca.Ross@hi.no>; Meyer, Heidi Kristina <heidi.kristina.meyer@hi.no>
Subject: YoloV8

Hi Alex,

So here is the documentation for yoloV8 and their modelling ecosystem: Ultralytics YOLOv8 Tasks - Ultralytics YOLOv8 Docs
This is mostly high level code (Python and CLI) that controls other pytorch scripts that you can find here: ultralytics/ultralytics: NEW - YOLOv8 🚀 in PyTorch > ONNX > CoreML > TFLite (github.com)

Our code to go from Biigle to Yolo is found here: BIIGLE-resources/YOLO at main · DeepSeaCRU/BIIGLE-resources (github.com)
I am also attaching a small example dataset so you can see what it looks like for object detection and the code I used to train the detector

Finally, there is a small script I made to classify AUV image between “good” and “bad” quality/visibility just so you can see what the code looks like

I guess you will have questions about the code and how to use YOLO once you had a look so don’t hesitate to email back

Cheers

Nils