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14.09.2024

UNDO ↺ Human-robot Interaction

Installation Party!

Overview

1. Install
    a. Rhino3D version 7.0 (trial version available)
    b. Anaconda
    c. Visual Studio Code (or a source-code editor of your choice)
    d. Github desktop (optional, alternatively, you can use Git in the command line)
    e. Docker
    f. Agisoft Metashape (trial version **pro**)
2. Create a Conda environment with COMPAS, COMPAS_FAB AND COMPAS_RRC (see instructions)
3. Clone the course repository
4. Install *undo* library
5. Install Metashape module as a regular wheel package
6. Configure Visual Studio Code

Step 1 : Install Rhino

https://www.rhino3d.com/download/

Downloads

Für Windows

Komplette Installation

- **Rhino 7 für Windows - Einmalige Testversion** - Probieren Sie diese **Vollversion** 90 Tage lang aus. Nach Ablauf des Testzeitraums können Sie nicht mehr speichern und keine Plug-ins mehr laden, es sei denn Sie **erwerben** einen Lizenzschlüssel.
- **Rhino 7 für Windows** - *(Lizenzschlüsssel für Rhino 7 ist erforderlich)*

- **Flamingo nXt 5** - Rendering für Rhino
- **Bongo** - Designanimation für Rhino (30tägige Testversion)

Work-in-Progress

- **Serengeti Build** - die neueste WIP
  (Lizenzschlüssel für Rhino 7 ist erforderlich)

Archive

- Rhino 6 für Windows - *(Lizenzschlüssel für Rhino 6 ist erforderlich)*
- Rhino 5 für Windows - *(Lizenzschlüssel für Rhino 5 ist erforderlich)*
- Sprachpaket für Rhino 5 für Windows - Benutzeroberfläche und Dokumentation

Für Mac

Komplette Installation

- **Rhino 7 für Mac - Einmalige Testversion** - Probieren Sie diese **Vollversion** 90 Tage lang aus. Wenn Sie nach Ablauf des Testzeitraums speichern möchten, müssen Sie einen Lizenzschlüssel **erwerben**.
- **Rhino 7 für Mac** - *(Lizenzschlüssel für Rhino 7 ist erforderlich)*

Work-in-Progress

- **Serengeti Build** - die neueste WIP
  (Lizenzschlüssel für Rhino 7 ist erforderlich)

Archive

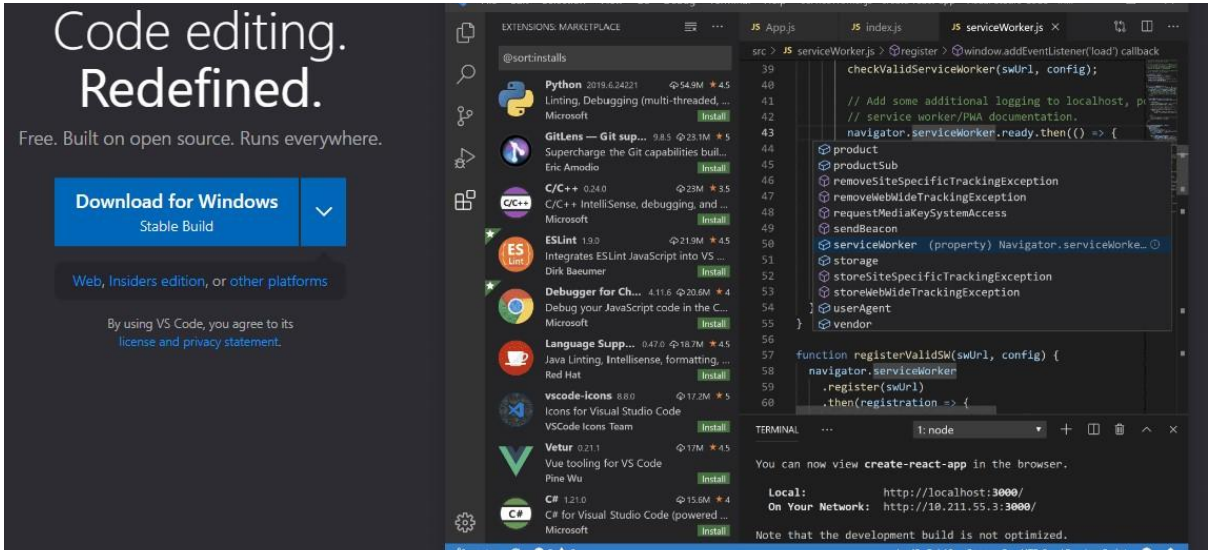
- Rhino 6 für Mac - *(Lizenzschlüssel für Rhino 6 ist erforderlich)*
- Rhino 5 für Mac - *(Lizenzschlüssel für Rhino 5 ist erforderlich)*

Step 1 : Install Anaconda

https://www.anaconda.com/products/distribution#Downloads

Step 1 : Install Visual Studio Code

https://code.visualstudio.com/



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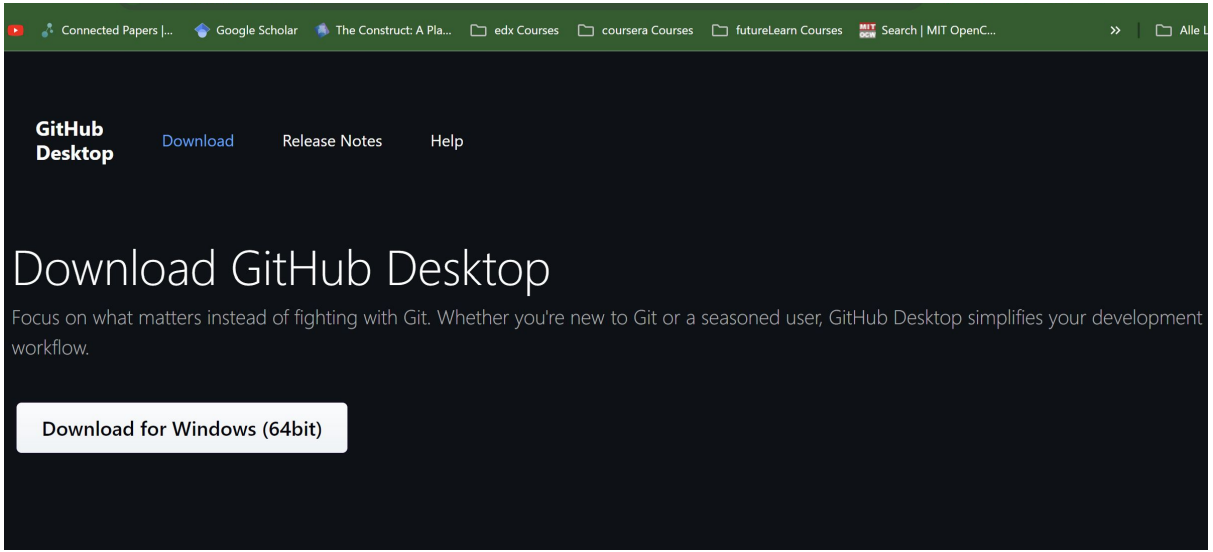
Step 1 : Install Github desktop

https://desktop.github.com/download/

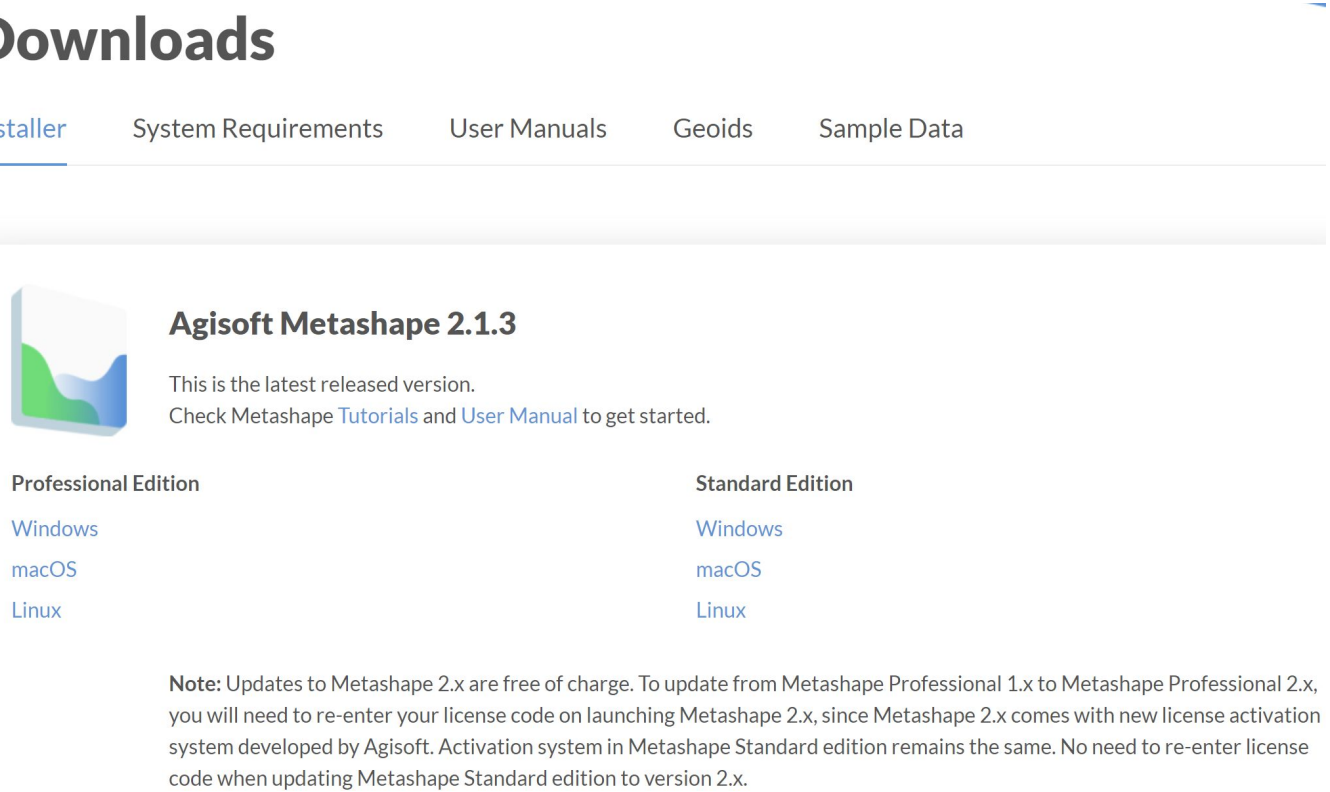


Step 1 : Install Docker

https://www.docker.com/products/docker-desktop

Step 1 : Install Agisoft Metashape

https://www.agisoft.com/downloads/installer/



Step 2 : Create a Conda environment with COMPAS Libraries

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```
(base) conda config --add channels conda-forge
```

```
(base) conda create -n undo python=3.9 -y
```

```
(base) conda activate undo
```

```
(undo) pip install compas-rrc==1.1.0
```

```
(undo) pip install compas_fab==0.27.0
```

```
(undo) python -m compas_rhino.install -v 7.0
```

https://github.com/CRCL-EPFL/Undo/blob/main/README.md

COMPAS suite

Image credits : Gonzalo Casas - Gramazio Kohler Research - ETHZurich

COMPAS suite

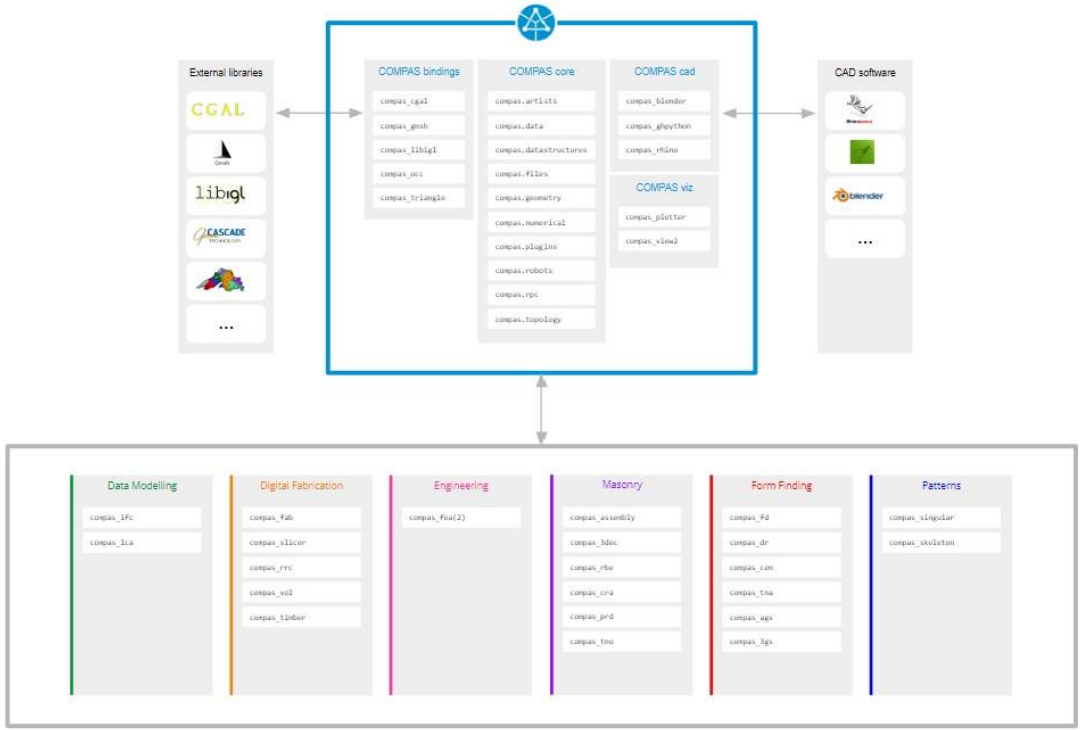

Image credits : Gonzalo Casas - Gramazio Kohler Research - ETHZurich

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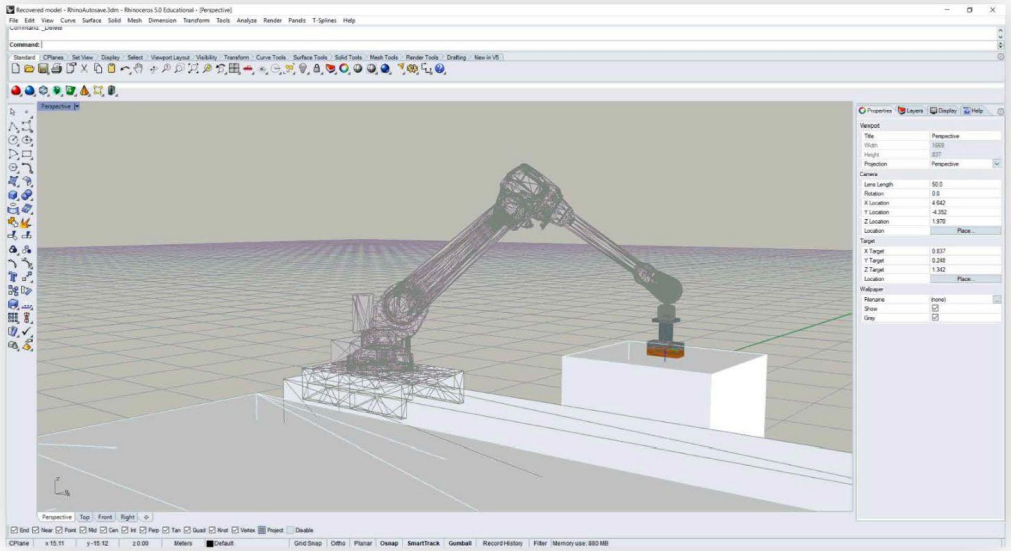
COMPAS suite



COMPAS FAB
Robotic fabrication package

Image credits : Gonzalo Casas - Gramazio Kohler Research - ETHZurich

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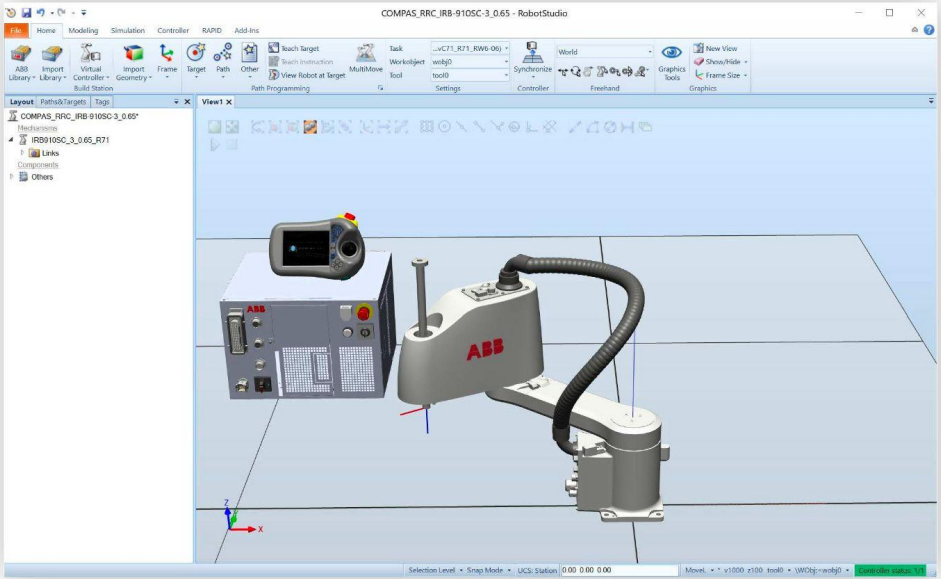
COMPAS suite



COMPAS RRC
Robot control for ABB robots

Image credits : Gonzalo Casas - Gramazio Kohler Research - ETHZurich

Step 2 : Create a Conda environment with COMPAS Libraries

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```
(base) conda config --add channels conda-forge
```

```
(base) conda create -n undo python=3.9 compas_rrc=1.1.0 --yes
```

```
(base) conda activate undo
```

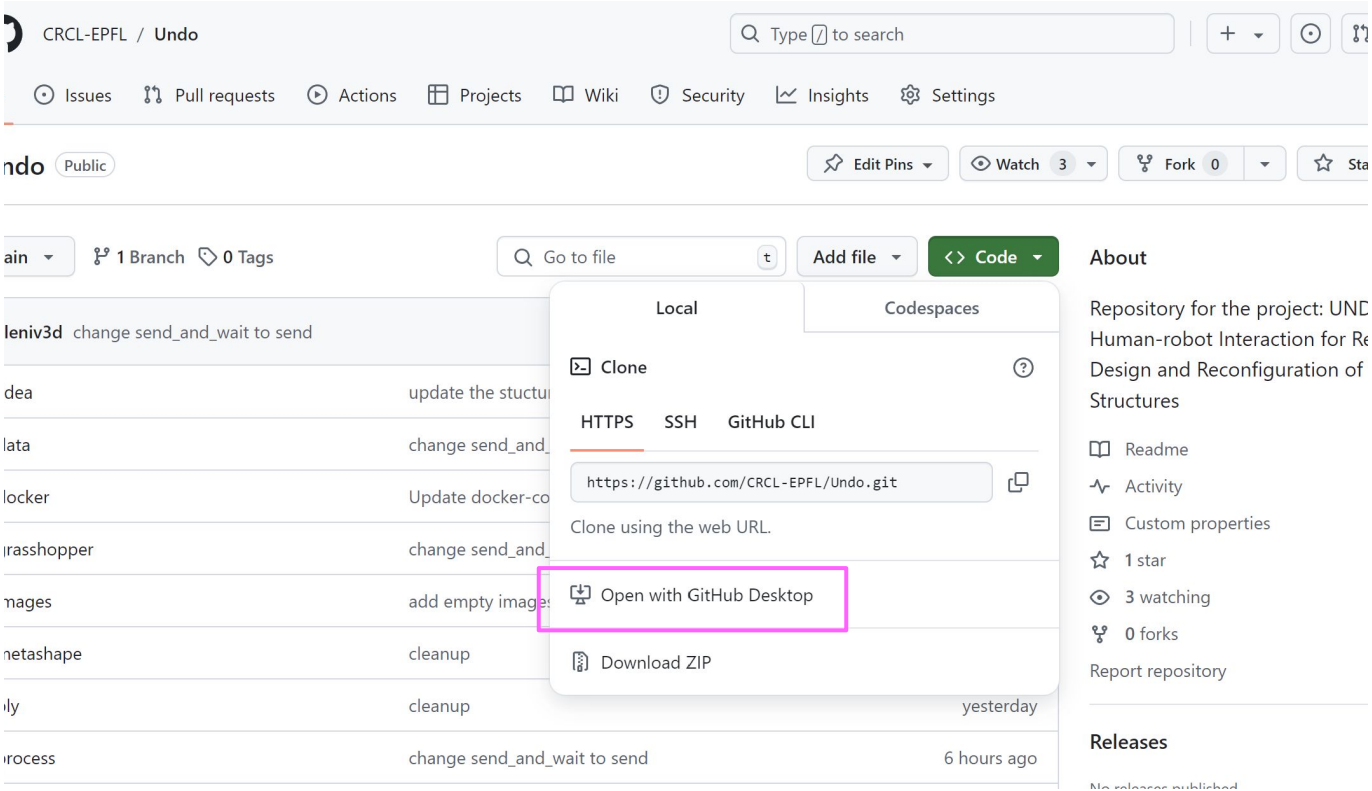
```
(undo) conda install compas_fab=0.27.0 --yes
```

```
(undo) python -m compas_rhino.install -v 7.0
```

https://github.com/CRCL-EPFL/Undo/blob/main/README.md

Step 3 : Clone the course repository

https://github.com/CRCL-EPFL/Undo



Step 4 : Install undo library

```
(undo) cd C:\Users\eleni\Documents\GitHub\Undo>
```

```
(undo) C:\Users\eleni\Documents\GitHub\Undo> pip install -e.
```

Step 5 : Install Metashape module as a regular wheel package

https://agisoft.freshdesk.com/support/solutions/articles/31000148930-how-to-install-metashape-stand-alone-python-module

on Windows (64-bit)

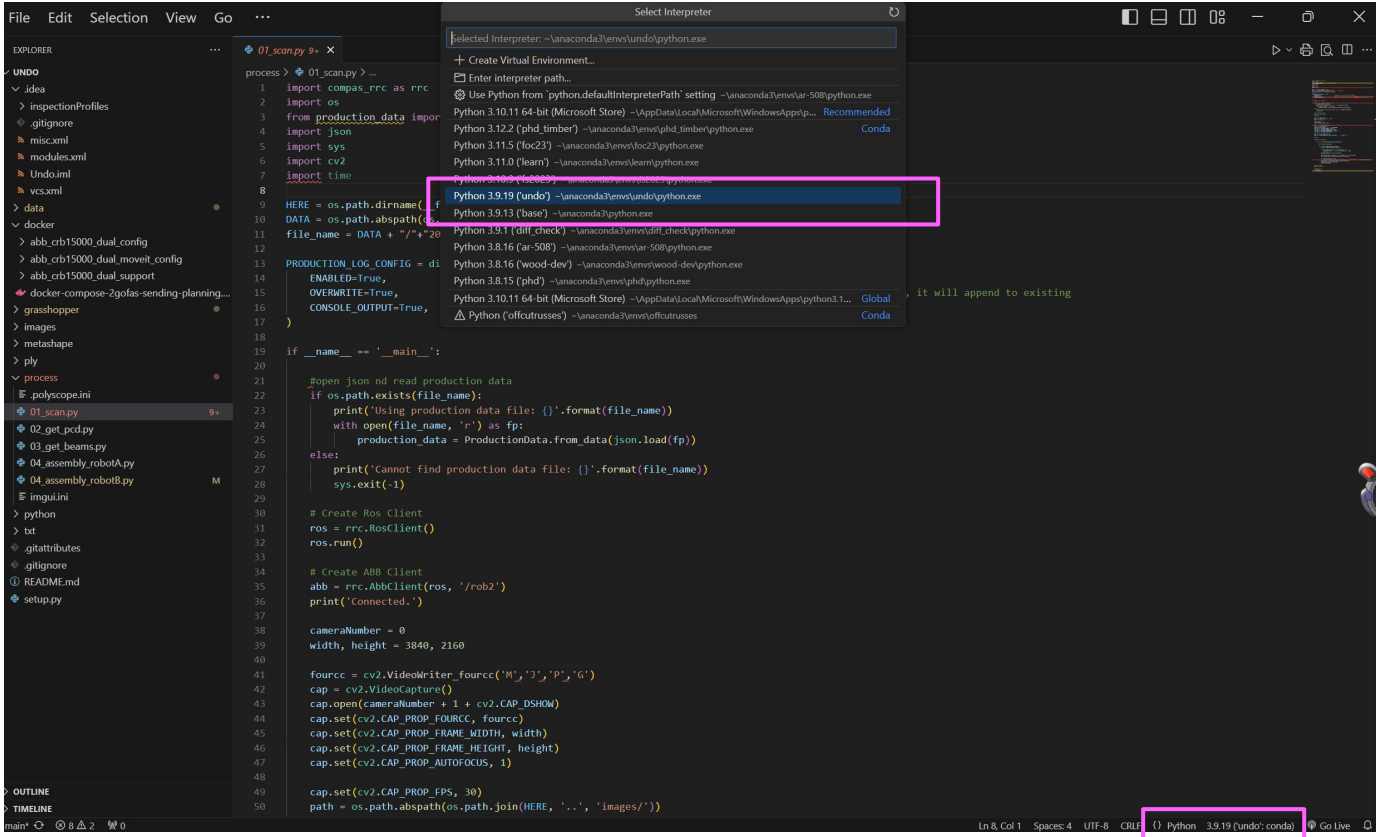
```
(undo) python3.exe -m pip install Metashape-2.1.2-cp37.cp38.cp39.cp310.cp311-none-win_amd64.whl
```

on mac first, rename the wheel file you downloaded to the following: Metashape-2.1.3-cp37.cp38.cp39.cp310.cp311-abi3-macosx_11_0_universal2.macosx_10_13_x86_64.whl

```
(undo) python3 -m pip install Metashape-2.1.3-cp37.cp38.cp39.cp310.cp311-abi3-macosx_11_0_universal2.
```

Step 6 : Configure Visual Studio Code

- make sure you are in the environment that we created



Step 6 : Configure Visual Studio Code

- Ctrl + Shift + P
- Terminal: Select Default Profile
- Command Prompt