



CEMES

# FemtoUP 2021 Install Party Sébastien Weber



# Setting up a python environment

On your computer :

## py27env



Environment related to python 2.7 old packages

## py35env



- Environment related to python 3.5
- For a specific use

## py38env



- Environment related to python 3.9
- For latest features testing

Various python installed :

- Some are system wide
- Located within programs (e.g. Inkscape...)
- Some versions required for specific programs (v2.7 for old ones, 32bits version, specific packages not compatible...)

**Solution : using an environment manager**

# Using conda as environment manager

py38env



- Environment related to python 3.9
- For latest features testing
- Package1
- Package2
- ...

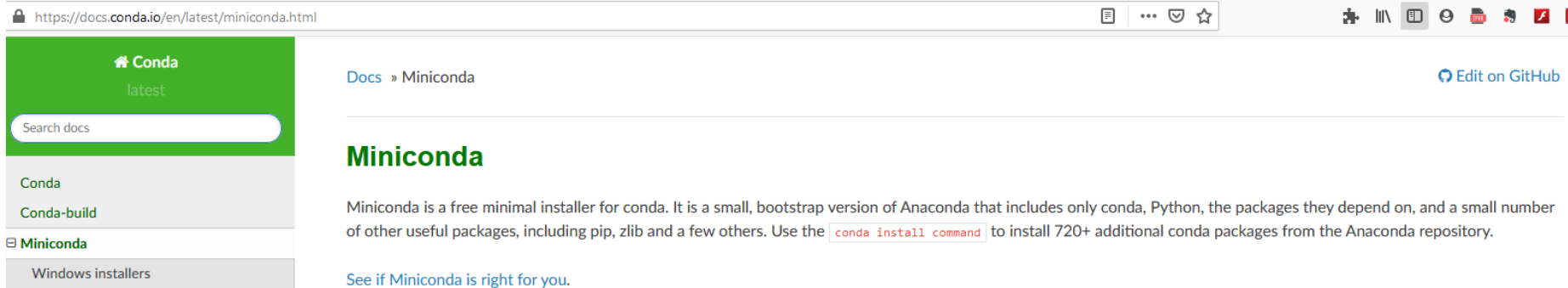
Managing environment (conda or venv):

- One python version
- Given packages

Managing packages (conda or pip):

- Specific packages on given servers
- Conda server                      using conda
- PyPi server                        using pip

## Lightweight conda : Miniconda



The screenshot shows the Miniconda documentation page in a web browser. The address bar displays <https://docs.conda.io/en/latest/miniconda.html>. The page has a green sidebar on the left with the 'Conda' logo and a search bar. The main content area has a breadcrumb 'Docs » Miniconda' and a link to 'Edit on GitHub'. The title 'Miniconda' is in green. The text describes Miniconda as a free minimal installer for conda, a small bootstrap version of Anaconda. It mentions that it includes conda, Python, and their dependencies, along with a small number of other useful packages like pip, zlib, and a few others. It provides the command `conda install command` to install 720+ additional conda packages from the Anaconda repository. A link 'See if Miniconda is right for you.' is at the bottom.

# Other required software: Git

https://git-scm.com/downloads



--local-branching-on-the-cheap

Search entire site...

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## Downloads



macOS



Windows



Linux/Unix

Older releases are available and the [Git source](#)

Latest source Release

**2.30.1**

[Release Notes \(2021-02-08\)](#)

Download 2.30.1 for Windows

Required to get last development packages for the practicals

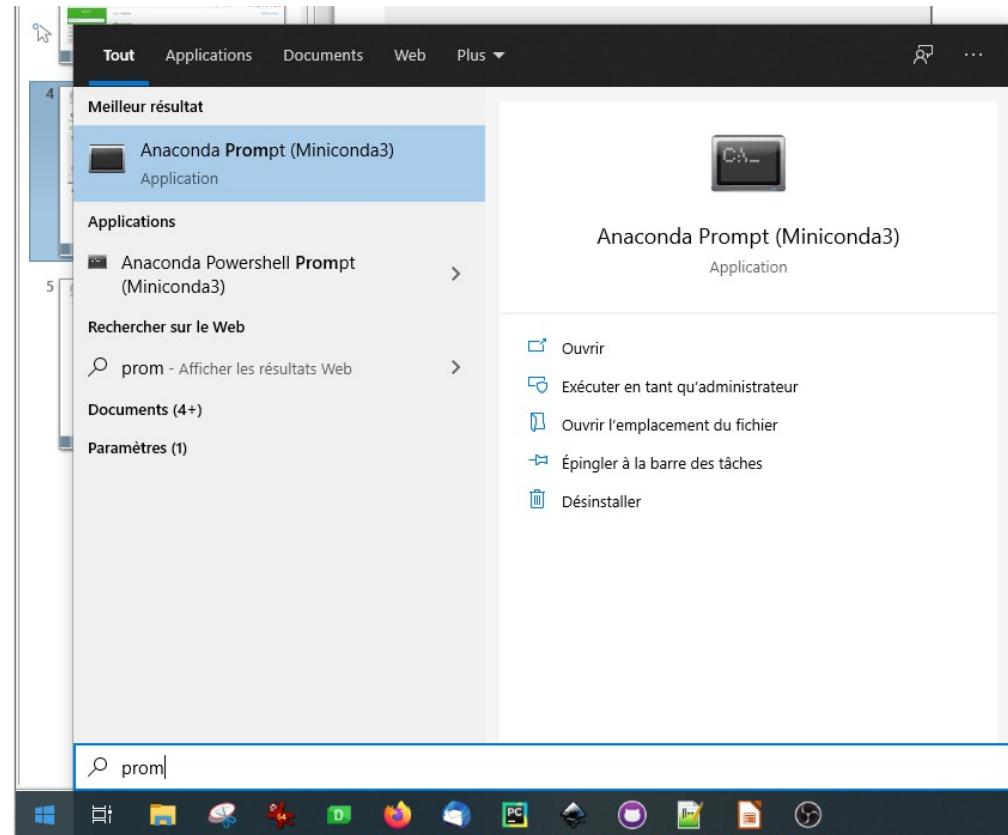
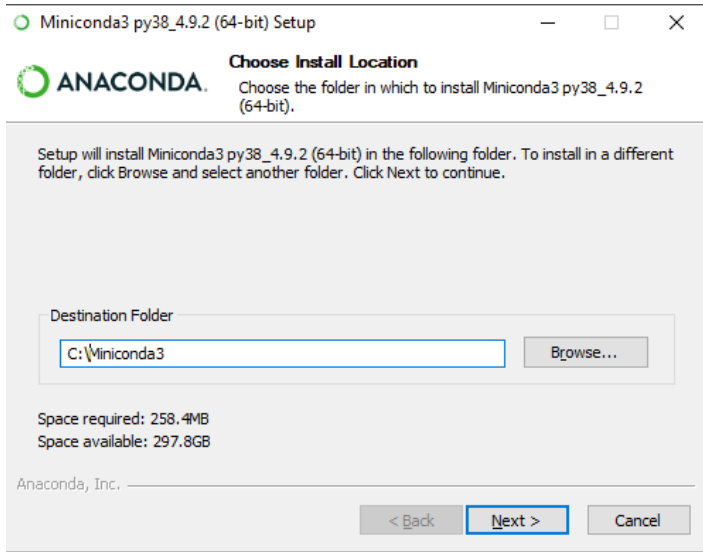
(Mac and Linux users may already have it on their computer!)

To check this enter « `git --version` » on your command line

```
(base) C:\Users\weber\Labo\Programmes Python\Git_others\FemtoUP2021\installation>git --version
git version 2.26.0.windows.1
```

# Installation using Miniconda

## 1) Installing Miniconda (on root folder for ease)



## 2) Starting the Command Prompt

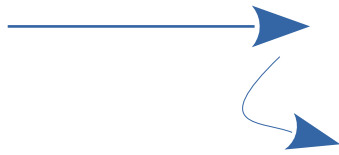
# Creating and using environment

In the anaconda prompt

- Create a new environment

```
(base) C:\Users\weber>conda create -n femtoup python=3.8.5
```

- Activate it



```
(base) C:\Users\weber>conda activate femtoup
```

```
(femtoup) C:\Users\weber>
```

- Install packages

One should install :

- Spyder (using conda)
- Jupyterlab (using pip)
- Pymodaq (using pip)

```
(femtoup) C:\Users\weber>conda install spyder
```






```
(femtoup) C:\Users\weber>pip install jupyterlab
```




# Environment file


 [Ecole-Femto-2021 / installation](https://github.com/Ecole-Femto-2021/installation)

<https://github.com/Ecole-Femto-2021/installation/>

 Code  Issues  Pull requests  Actions  Projects

 main  [installation](#) / [env\\_install.yml](#)

 seb5g Update env\_install.yml

 1 contributor

10 lines (9 sloc) 126 Bytes

```
1 name: femtoupfile
2 dependencies:
3   - python=3.8
4   - pip
5   - numpy==1.9.3
6   - spyder
7
8   - pip:
9     - pymodaq
10    - jupyterlab
```

Environment name

Packages installed using conda server : « conda install mypackage »

Packages installed using pip server : « pip install mypackage »

```
(base) C:\Users\weber>conda env create -f env_install.yml
```

# Updating the Environment

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If for some reason, the environment file is modified, you'll need to download it again and update the environment using :

```
(femtoupfile) C:\Users>conda env update --prefix ./env --file env_install.yml --prune
```



# Now is your turn!

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