

Installing Jupyter Notebook linked to your R version

1. Install Python relying on “conda”

Conda is an open source package management system and environment management system that runs on Windows, macOS, and Linux.

<https://docs.conda.io/projects/conda/en/latest/>

Two ways to proceed

1a [Anaconda](#) (> 5 Go)

A downloadable, free, open source, high-performance and optimized Python distribution. Anaconda includes [conda](#), conda-build, Python, and 100+ automatically installed, open source scientific packages and their dependencies that have been tested to work well together, including SciPy, NumPy and many others. It also **includes the Jupyter Notebook**.

1b [Miniconda](#) (~ 1 Go)

A free minimal installer for conda. [Miniconda](#) is a small, bootstrap version of Anaconda that includes only conda, Python, the packages they depend on and a small number of other useful packages, including pip, zlib and a few others. **Jupyter Notebook will need to be installed after by using conda within the miniconda console.**

Anaconda or Miniconda ?

<https://docs.conda.io/projects/conda/en/latest/user-guide/install/download.html#anaconda-or-miniconda>

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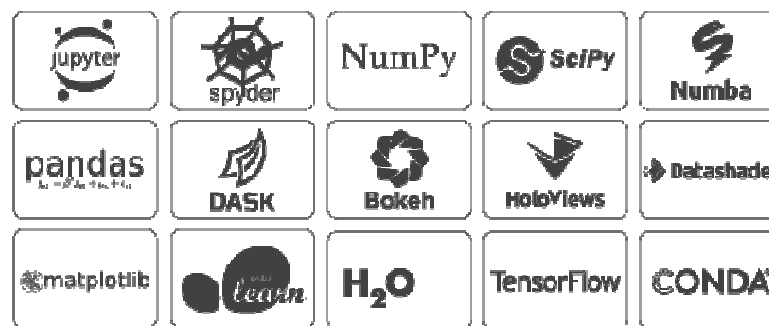
1a. Install Anaconda (> 5 Go)

Anaconda Distribution

 Windows |  macOS |  Linux

<https://www.anaconda.com/distribution/>

... and follow the setup instructions



In the advanced options, I personally like to choose "**Add Anaconda to my PATH environment**" as I think it makes life easier.

See  **ANACONDA.DOCUMENTATION** <https://docs.anaconda.com/anaconda/install/>

Go to the step 2

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1b. Install Miniconda (~ 1 Go)

Miniconda Distribution



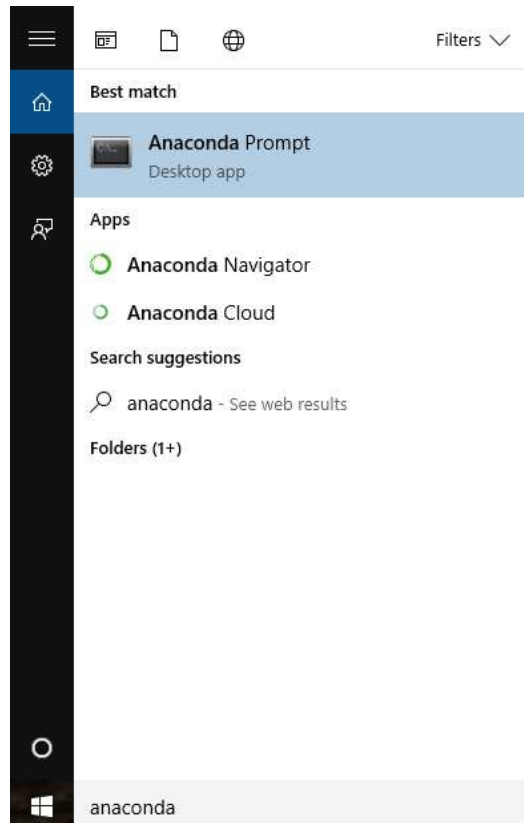
<https://docs.conda.io/en/latest/miniconda.html>

... and follow the setup instructions

In the advanced options, I personally like to choose "**Add Anaconda to my PATH environment**" as I think it makes life easier.

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1b. Install Jupyter Notebook relying on conda



Windows : Search for the Miniconda Prompt in your computer, then open it
macOS : Open a terminal shell

In the prompt type

```
conda install jupyter
```

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IRkernel

2. Open R and install the necessary packages

Open up R

Warnings : 1 - under R-Gui or command-line but not RStudio!

2 - it's important that these next commands are done
from within the version of R that you want to link to Jupyter

and enter :

```
R> install.packages(c('repr', 'IRdisplay', 'evaluate', 'crayon', 'pbdZMQ', 'devtools', 'uuid', 'digest'))
R> devtools::install_github('IRkernel/IRkernel')
R> IRkernel::installspec()
```

You must see a message like this (e.g. under Windows)

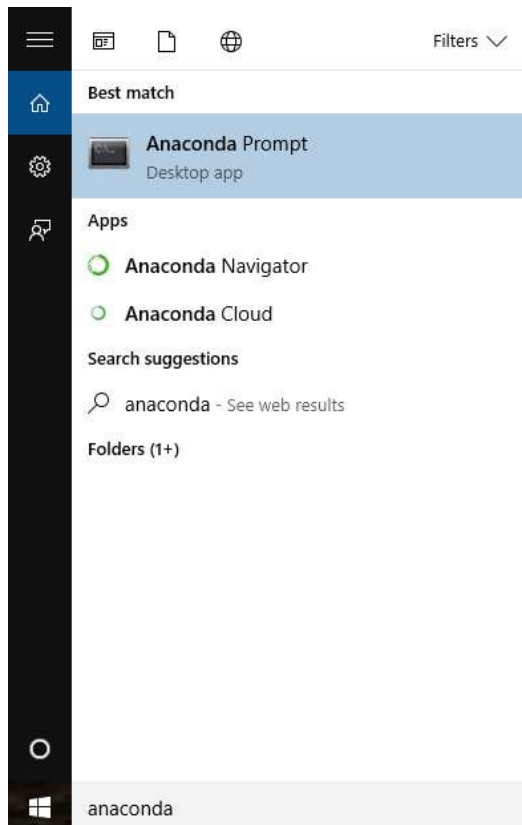
[InstallKernelSpec] Installed kernelspec ir in C:\Users\user\AppData\Roaming\jupyter\kernels\ir

See also <http://richpauloo.com/2018-05-16-Installing-the-R-kernel-in-Jupyter-Lab/>
<https://bence.ferdinandy.com/2018/11/22/fastest-way-to-set-up-r-with-jupyter-on-windows/>

Changing the default Jupyter notebook working directory

Windows : Search for the Anaconda/Miniconda Prompt in your computer, then open it

macOS : Open a terminal shell



In the prompt type (Windows)

```
jupyter notebook --notebook-dir=C:\Workdir
```

Or (macOS)

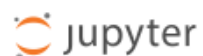
```
jupyter notebook --notebook-dir=/workdir
```

Anaconda console (under Windows)

```
Jupyter Notebook (Anaconda3)
[I 14:23:52.625 NotebookApp] JupyterLab extension loaded from C:\_Tools\Anaconda3\lib\site-packages\jupyterlab
[I 14:23:52.625 NotebookApp] JupyterLab application directory is C:\_Tools\Anaconda3\share\jupyter\lab
[W 14:23:52.627 NotebookApp] Error loading server extension nteract_on_jupyter
Traceback (most recent call last):
  File "C:\_Tools\Anaconda3\lib\site-packages\notebook\notebookapp.py", line 1615, in init_server_extensions
    mod = importlib.import_module(modulename)
  File "C:\_Tools\Anaconda3\lib\importlib\_init_.py", line 127, in import_module
    return _bootstrap._gcd_import(name[level:], package, level)
  File "<frozen importlib._bootstrap>", line 1006, in _gcd_import
  File "<frozen importlib._bootstrap>", line 983, in _find_and_load
  File "<frozen importlib._bootstrap>", line 965, in _find_and_load_unlocked
ModuleNotFoundError: No module named 'nteract_on_jupyter'
[I 14:23:52.629 NotebookApp] Serving notebooks from local directory: C:/Workdir/
[I 14:23:52.629 NotebookApp] The Jupyter Notebook is running at:
[I 14:23:52.629 NotebookApp] http://localhost:8888/?token=eba510149073bc73ac157d19352d3d4649103d0d8f201704
[I 14:23:52.629 NotebookApp] or http://127.0.0.1:8888/?token=eba510149073bc73ac157d19352d3d4649103d0d8f201704
[I 14:23:52.629 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 14:23:52.676 NotebookApp]

To access the notebook, open this file in a browser:
  file:///C:/Users/djaco.GAIA/AppData/Roaming/jupyter/runtime/nbserver-22436-open.html
Or copy and paste one of these URLs:
  http://localhost:8888/?token=eba510149073bc73ac157d19352d3d4649103d0d8f201704
  or http://127.0.0.1:8888/?token=eba510149073bc73ac157d19352d3d4649103d0d8f201704
[I 14:24:20.869 NotebookApp] Kernel started: ecd6d2dc-ea60-49f8-b8ea-cece90985840
[I 14:24:21.584 NotebookApp] Adapting from protocol version 5.0 (kernel ecd6d2dc-ea60-49f8-b8ea-cece90985840) to 5.3 (client).
```

Jupyter Notebook (within your default web browser)



Quit Logout

Files Running Clusters

Select items to perform actions on them.

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| <input type="checkbox"/> 0 | | Name ↓ | Last Modified | File size |
|----------------------------|---------------------------|--------|------------------------|-----------|
| <input type="checkbox"/> | .. | | seconds ago | |
| <input type="checkbox"/> | R_nmr_deconv.ipynb | | Running 28 minutes ago | 36.3 MB |
| <input type="checkbox"/> | R_nmr_deconv_simple.ipynb | | 5 days ago | 5.79 kB |
| <input type="checkbox"/> | commons.R | | 3 hours ago | 9.25 kB |
| <input type="checkbox"/> | deconv_examples.R | | 6 days ago | 3.02 kB |
| <input type="checkbox"/> | deconv_model.R | | 6 days ago | 2.07 kB |
| <input type="checkbox"/> | nmr_deconv_simple.Rmd | | 5 days ago | 3.35 kB |
| <input type="checkbox"/> | optim1.R | | 3 hours ago | 2.21 kB |
| <input type="checkbox"/> | optim2.R | | 2 hours ago | 2.29 kB |
| <input type="checkbox"/> | rnmrfit_test.R | | 5 days ago | 2.08 kB |
| <input type="checkbox"/> | sample_examples.R | | 6 days ago | 1.25 kB |
| <input type="checkbox"/> | sample_model.R | | 3 hours ago | 2.76 kB |

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Another method to setup Jupyter Notebook for R

Without Anaconda and Minconda

<https://developers.refinitiv.com/article/setup-jupyter-notebook-r>

Jupyter Notebook extensions

https://github.com/ipython-contrib/jupyter_contrib_nbextensions

<https://towardsdatascience.com/jupyter-notebook-extensions-517fa69d2231>

Mathematics in R Markdown

<https://www.calvin.edu/~rpruim/courses/s341/S17/from-class/MathinRmd.html>

<http://www.math.mcgill.ca/yyang/regression/RMarkdown/example.html>