## Installation Guide: How to install Jupyter Lab on your computer

In the Python workshop, we will use Anaconda, which is one of the most popular distributions for Python and R and used by many data scientists.

## The Anaconda for Windows Installation Guide is intuitive and will guide you through the installation process.

1. Install Anaconda on Windows

To install Anaconda on your business computer, you might need admin rights. In this case, please contact the Orsay Helpdesk. After the installation has completed, you will see the "Thanks for installing Anaconda" dialog box. There may be a browser window opening

and asking for registration. This step can be skipped. Now, we will start Jupyter Lab.

1. Anaconda Navigator which is a Graphical User Interface (GUI)

2. Anaconda Prompt which is a Command Line Interface (CLI).

**Info:** Juypter Lab can be started in two different ways:

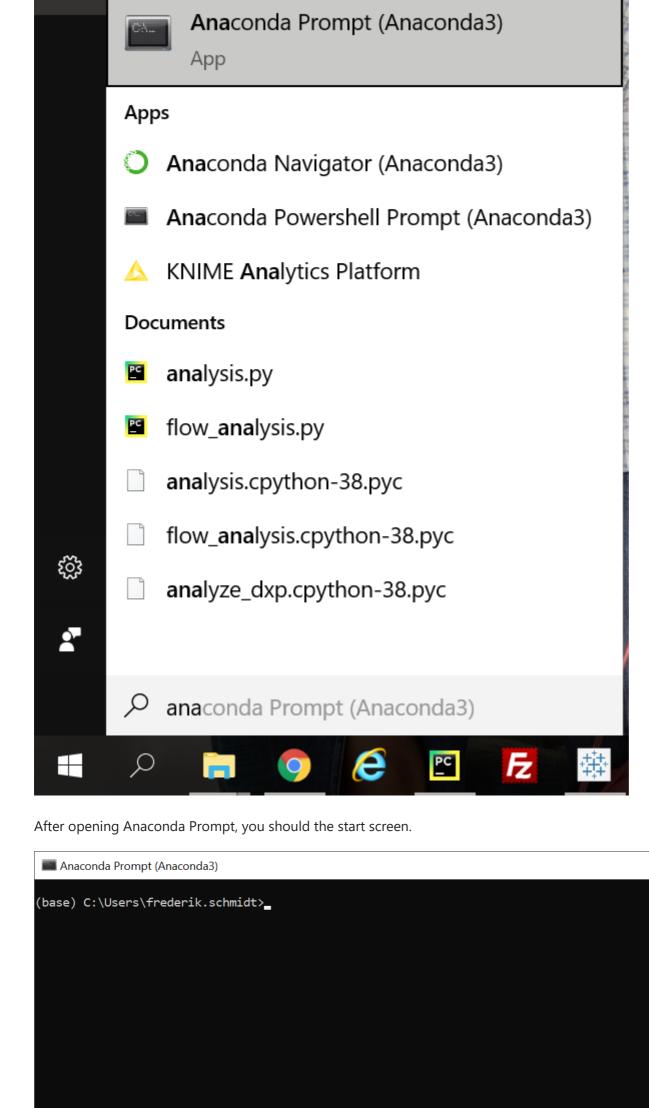
Click here for more info. We will start Jupyter Lab from the Anaconda Prompt in this installation guide.

2. On your Windows computer, click Start and Search for Anaconda Prompt.

If Anaconda was installed properly, the Anaconda Prompt Desktop App should appear now.

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2. Create a virtual environment for your project We strongly recommend that you use virtual environments to install libraries. A virtual environment is a tool that helps to keep dependencies required by different projects separate by creating isolated Python virtual environments for them. It is one of the most important tools that most of the Python developers use. **Execute the following command in your Anaconda Prompt:** conda create -n python\_workshop\_env python=3.8 jupyterlab pandas numpy matplotlib This command creates a new virtual environment called <a href="python\_workshop\_env">python\_workshop\_env</a> (you can use any other name). It will install: Python version 3.8 • Jupyter Lab (one of the most popular user interfaces for Python programming) Pandas (Python package for analyzing data) NumPy (Python package for working with numbers) Matplotlib (Python package) Anaconda Prompt (Anaconda3) X

(base) C:\Users\frederik.schmidt>conda create -n python\_workshop\_env python=3.8 jupyterlab pandas numpy matplotlib

During installation, you will be asked to verify the installation. Execute y to create the virtual environment.

🔳 Anaconda Prompt (Anaconda3) - conda 🛮 create -n python\_workshop\_env python=3.8 jupyterlab pandas numpy matplotlib

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pkgs/main/win-64::qt-5.9.7-vc14h73c81de\_0 pkgs/main/noarch::requests-2.25.1-pyhd3eb1b0\_0 requests send2trash pkgs/main/noarch::send2trash-1.5.0-pyhd3eb1b0\_1 setuptools pkgs/main/win-64::setuptools-52.0.0-py38haa95532\_0 pkgs/main/win-64::sip-4.19.13-py38ha925a31\_0 sip six pkgs/main/win-64::six-1.15.0-py38haa95532\_0 pkgs/main/win-64::sniffio-1.2.0-py38haa95532\_1 sniffio pkgs/main/win-64::sqlite-3.35.4-h2bbff1b\_0 sqlite pkgs/main/win-64::terminado-0.9.4-py38haa95532\_0 terminado testpath pkgs/main/noarch::testpath-0.4.4-pyhd3eb1b0\_0 pkgs/main/win-64::tk-8.6.10-he774522\_0 tornado pkgs/main/win-64::tornado-6.1-py38h2bbff1b\_0 traitlets pkgs/main/noarch::traitlets-5.0.5-pyhd3eb1b0\_0 urllib3 pkgs/main/noarch::urllib3-1.26.4-pyhd3eb1b0\_0 pkgs/main/win-64::vc-14.2-h21ff451\_1 vs2015\_runtime pkgs/main/win-64::vs2015\_runtime-14.27.29016-h5e58377\_2 pkgs/main/noarch::wcwidth-0.2.5-py\_0 wcwidth pkgs/main/win-64::webencodings-0.5.1-py38\_1 webencodings pkgs/main/noarch::wheel-0.36.2-pyhd3eb1b0\_0 wheel win\_inet\_pton pkgs/main/win-64::win\_inet\_pton-1.1.0-py38haa95532\_0 wincertstore pkgs/main/win-64::wincertstore-0.2-py38\_0 winpty pkgs/main/win-64::winpty-0.4.3-4 pkgs/main/win-64::xz-5.2.5-h62dcd97\_0 pkgs/main/win-64::zeromq-4.3.3-ha925a31\_3 zeromq pkgs/main/noarch::zipp-3.4.1-pyhd3eb1b0\_0 zipp zlib pkgs/main/win-64::zlib-1.2.11-h62dcd97\_4 pkgs/main/win-64::zstd-1.4.9-h19a0ad4\_0 zstd Proceed ([y]/n)? \_ 3. Activate your environment **Execute the following command in your Anaconda Prompt:** conda activate python\_workshop\_env (or what ever name you gave your virtual environment) Now, you are in your environment and you can use the packages you installed while creating the virtual environment. It is important to always activate the environment before you start working on your project! Anaconda Prompt (Anaconda3)

Executing transaction: - DEBUG menuinst\_win32:\_\_init\_\_(198): Menu: name: 'Anaconda\${PY\_VER} \${PLATFORM}', prefix: 'C:\Us ers\frederik.schmidt\Anaconda3\envs\python\_workshop\_env', env\_name: 'python\_workshop\_env', mode: 'user', used\_mode: 'use

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DEBUG menuinst\_win32:create(323): Shortcut cmd is C:\Users\frederik.schmidt\Anaconda3\python.exe, args are ['C:\\Users\\ frederik.schmidt\\Anaconda3\\cwp.py', 'C:\\Users\\frederik.schmidt\\Anaconda3\\envs\\python\_workshop\_env', 'C:\\Users\\f rederik.schmidt\\Anaconda3\\envs\\python\_workshop\_env\\python.exe', 'C:\\Users\\frederik.schmidt\\Anaconda3\\envs\\pytho

We recommend using Jupyter Lab in Google Chrome. If you use a different default browser, the Jupyter Lab window may not open

DEBUG menuinst\_win32:create(323): Shortcut cmd is C:\Users\frederik.schmidt\Anaconda3\python.exe, args are ['C:\\Users\\ frederik.schmidt\\Anaconda3\\cwp.py', 'C:\\Users\\frederik.schmidt\\Anaconda3\\envs\\python\_workshop\_env', 'C:\\Users\\f rederik.schmidt\\Anaconda3\\envs\\python\_workshop\_env\\python.exe', 'C:\\Users\\frederik.schmidt\\Anaconda3\\envs\\pytho n\_workshop\_env\\Scripts\\jupyter-notebook-script.py', '"%USERPROFILE%/"']

Info: If you want to install other packages execute the following command in your Anaconda Prompt:

pkgs/main/win-64::zstd-1.4.9-h19a0ad4\_0

## Downloading and Extracting Packages prometheus\_client-0. | 47 KB 1.8 MB pip-21.1.2 Preparing transaction: done

To activate this environment, use

\$ conda deactivate

<jupyter\_lab\_link>

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\$ conda activate python\_workshop\_env

To deactivate an active environment, use

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Preparing transaction: done Verifying transaction: done

Downloading and Extracting Packages

To activate this environment, use

\$ conda deactivate

conda install <package\_name>

4. Launch your Jupyter Lab

Anaconda Prompt (Anaconda3)

Verifying transaction: done

jupyter lab

done

Proceed ([y]/n)? y

\$ conda activate python\_workshop\_env

(base) C:\Users\frederik.schmidt>conda activate python\_workshop\_env

n\_workshop\_env\\Scripts\\jupyter-notebook-script.py', '"%USERPROFILE%/"']

(base) C:\Users\frederik.schmidt>conda activate python\_workshop\_env

In this case, you can manually open the Jupyter Lab link from your Anaconda Prompt:

(python\_workshop\_env) C:\Users\frederik.schmidt>jupyter lab\_

Now, a Jupyter Lab window should open in your browser.

**Execute the following command in your Anaconda Prompt:** 

To deactivate an active environment, use

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<jupyter\_lab\_link> Anaconda Prompt (Anaconda3) - jupyter lab

To access the server, open this file in a browser:

Or copy and paste one of the following URLs:

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[W 2021-06-14 11:43:23.548 ServerApp] The 'min\_open\_files\_limit' trait of a ServerApp instance expected an int, not the NoneType None. [I 2021-06-14 11:43:24.133 LabApp] JupyterLab extension loaded from C:\Users\frederik.schmidt\Anaconda3\envs\python\_work shop\_env\lib\site-packages\jupyterlab [I 2021-06-14 11:43:24.133 LabApp] JupyterLab application directory is C:\Users\frederik.schmidt\Anaconda3\envs\python\_w orkshop\_env\share\jupyter\lab [I 2021-06-14 11:43:24.140 ServerApp] jupyterlab | extension was successfully loaded. [I 2021-06-14 11:43:27.664 ServerApp] nbclassic | extension was successfully loaded. [I 2021-06-14 11:43:27.665 ServerApp] Serving notebooks from local directory: C:\Users\frederik.schmidt\PycharmProjects\ ad\_hoc\_analyses\FST\_20210610\_python\_workshop\_installation\_guide [I 2021-06-14 11:43:27.667 ServerApp] Jupyter Server 1.4.1 is running at: [I 2021-06-14 11:43:27.671 ServerApp] http://localhost:8888/lab?token=e266971db03db1b09f71710cf9bceebfc8a677693f5493c9 [I 2021-06-14 11:43:27.672 ServerApp] or http://127.0.0.1:8888/lab?token=e266971db03db1b09f71710cf9bceebfc8a677693f5493 [I 2021-06-14 11:43:27.674 ServerApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirm To access the server, open this file in a browser: file:///C:/Users/frederik.schmidt/AppData/Roaming/jupyter/runtime/jpserver-11744-open.html Or copy and paste one of these URLs: http://localhost:8888/lab?token=e266971db03db1b09f71710cf9bceebfc8a677693f5493c9 or http://127.0.0.1:8888/lab?token=e266971db03db1b09f71710cf9bceebfc8a677693f5493c9 [W 2021-06-14 11:43:40.202 LabApp] Could not determine jupyterlab build status without nodejs [W 2021-06-14 11:43:45.499 ServerApp] 404 GET /api/contents/Untitled.ipynb?content=0&1623663825495 (::1): No such file o r directory: Untitled.ipynb [W 2021-06-14 11:43:45.499 ServerApp] No such file or directory: Untitled.ipynb [W 2021-06-14 11:43:45.502 ServerApp] 404 GET /api/contents/Untitled.ipynb?content=0&1623663825495 (::1) 4.01ms referer= http://localhost:8888/lab You can now add a Python 3 Notebook file by clicking on the upper Python 3 icon.

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You successfully installed Anaconda and Jupyter Lab. Now you can start working on your project!