

## INSTRUCTIONS FOR DOWNLOADING, INSTALLING & CUSTOMIZING ANACONDA (WITH JUPYTER AND R) FOR WINDOWS 10

### 1. DOWNLOADING & INSTALLATION

- (1) Go to <https://www.anaconda.com/products/individual>
- (2) Click on “Download” next to the Windows symbol, and ignore the window that pops up (it invites you to join a user community, might be useful, but at your own risk)
- (3) At the bottom of your window click on the .exe tab to launch the installer.
- (4) Follow the installation instructions, accepting all default settings.
- (5) Click install. This will install Anaconda in your `c:\Users\yourname\` folder, which is fine for now.
- (6) You will find the Anaconda installation by clicking on the Window symbol in the lower left corner of your screen and scrolling down the program list. You may want to drag the Anaconda symbol (green circle with white webbing on left half) to your shortcut bar or desktop for quick access.
- (7) There is a 12-min tutorial which I found very useful, especially the part on installing and updating additional packages

### 2. CUSTOMIZING ANACONDA AND JUPYTER FOR USE WITH PYTHON AND R

- (1) Open Anaconda (formally, the “Anaconda.Navigator”) - this will take a few seconds. You will see a set of programs that came in with the Anaconda package.
- (2) If you have problems re-sizing the Navigator to fit your laptop screen, go to “File Preferences” and de-select “enable high DPI scaling”; then quit and restart Anaconda.
- (3) In Anaconda.Navigator, click on the “Environments” tab, and switch “installed” to “not installed”
- (4) search for “irkernel” and click “Apply” (bottom of screen)
- (5) click “Apply” again (when you see the list of dependencies) to finish the installation - this will install the R package for Jupyter and will take a few minutes. Just in case we need an occasional R-command or graph down the line.
- (6) Make sure to clear the “irkernel” search term on the left
- (7) Within “Environments” click on “Channels”, “Add,” and type “conda-forge.” Then click “update channels” - this will give you access to thousands of user-created packages.
- (8) Still making sure “not installed” is selected, search for “nbextensions.” This will bring up two packages - “jupyter\_contrib\_nbextensions,” and “jupyter\_nbextensions.” Select both and click “apply” twice as before to install these packages. They will add functionality to your notebook, such as automatic equation numbering, referencing, and updating.
- (9) Clear the “nbextensions” search term and make sure “not installed” is selected. Then search for “variableinspector” and install the packages following the same steps as above. This will allow you to take a (basic) look at all the elements in your current workspace.
- (10) We will occasionally need to install additional packages in this course - follow these steps on all occasions, *before you launch your notebook.*

### 3. LAUNCHING JUPYTER LAB AND OPENING A NOTEBOOK

- (1) In Anaconda navigator, go to the “home” screen and launch the CMD.exe prompt (first square in upper row).
- (2) By default, the first line in the command prompt will give you the directory where Anaconda was originally installed - in my case:  
`(base) C:\Users\moeltner>`
- (3) You will change this to your course folder, so you can see all files and materials in that folder when you open Jupyter. Else you will not be able to access the folder. You will need to do this *every time you start Anaconda / Jupyter*. It’s a well-known nuisance, but only takes a few seconds. In my case, I have to type “cd C:\Klaus\EVEC2022”, because that’s where my course folder is located, so the entire line looks like this:  
`(base) C:\Users\moeltner>cd C:\Klaus\EVEC2022`  
and press Enter - this will switch the current directory to your course environment.
- (4) Then type “jupyter lab”, so the entire line looks like this:  
`(base) C:\Klaus\EVEC2022>jupyter lab`  
and press Enter.
- (5) This will launch the Jupyter notebook interface as a new tab in your web browser (note: You do NOT have to be online to use Jupyter, unless of course you want to upload or download files from the web down the line).
- (6) Click on the “Python3” kernel button - this will open a new Jupyter notebook that is ready to work with Python. It is called “Untitled.ipynb”. You can rename this book by right-clicking on the file name and selecting “rename.”
- (7) Note: If the launch already opens a new file you can still change the software kernel in the upper right hand side of the notebook window by clicking on “Python” and changing the kernel to R (or vice versa), as desired.
- (8) On the left you should see your course folder environment.
- (9) Note that you need to keep your CMD.exe prompt open (in the background) as long as you are using Jupyter, else you will get a “server connection” error.