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How to run R on Jupyter ipython Notebooks?

r, ipython

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indutaneja11   **Oct '15**

Hello R Users

Recently, I came across ipython notebooks by Jupyter. Is there any use we run / install R on these notebooks? Considering, these are massive number of R users across the world, I presume there must be some hack / technique to install R on these notebooks.

I am keen to find this out. Please help!

Regards
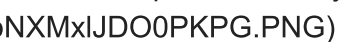Indu

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Manish   **Oct '15**

Hello Indu

Have you installed any ipython notebook in your machine yet?
Anyways, I'm going to elaborate the steps that helped me to run R on Jupyter ipython notebooks from scratch.

To enable R in Jupyter, you will need IRKernel (dedicated kernel for R) which is available at github. Below are the complete steps which I followed:

Step1: Download Anaconda from here: **Anaconda Download** In simple words, ipython notebooks live in Anaconda software. It is highly recommended for Jupyter notebooks

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Step 2: After you've successfully downloaded, open 'Anaconda Command Prompt'. Faster way is to search it in your OS. Anaconda command prompt looks like this. ![|690x350](upload://dBemoTYB0qfEabNXMxlJDO0PKPG.PNG)

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Step 3: Now type the following commands in prompt

```
ipython notebook
```

Voila! you've finally started your first ipython notebook. It looks like this:

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Click on 'New' on the right. You will only find Python 2 in your notebooks section. Lets add R now.

Step 4: Update your ipython notebook with this command (screenshot below)

```
conda update ipython-notebook
```

Step 5: Install IRkernel (screenshot below)

```
conda install -c r ipython-notebook r-irkernel
```

```
C:\Users\manish\Anaconda>conda install -c r ipython-notebook r-irkernel
Fetching package metadata: ......
Solving package specifications: ....................................
Package plan for installation in environment C:\Users\manish\Anaconda:

The following packages will be downloaded:

    package                    |            build
    ---------------------------|-----------------
    r-repr-0.3                 |        r3.1.3_0         45 KB
    r-rzmq-0.7.7               |        r3.1.3_0        393 KB
    r-uuid-0.1_1               |        r3.1.3_0         20 KB
    r-irdisplay-0.3            |        r3.1.3_0         24 KB
    jupyter_console-4.0.3      |          py27_0         62 KB
    qtconsole-4.1.0            |          py27_0        167 KB
    ipywidgets-4.0.3           |          py27_0         94 KB
    jupyter-1.0.0              |          py27_0          2 KB
    r-irkernel-0.4             |        r3.1.3_1         67 KB
    ------------------------------------------------------------
                                           Total:        874 KB

The following NEW packages will be INSTALLED:

    ipywidgets:      4.0.3-py27_0
    jupyter:         1.0.0-py27_0
    jupyter_console: 4.0.3-py27_0
    qtconsole:       4.1.0-py27_0
    r-irdisplay:     0.3-r3.1.3_0
    r-irkernel:      0.4-r3.1.3_1
    r-repr:          0.3-r3.1.3_0
    r-rzmq:          0.7.7-r3.1.3_0
    r-uuid:          0.1_1-r3.1.3_0

Proceed ([y]/n)? y

Fetching packages ...
```

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Step 6: You can now open R in your commands prompt with this command.

`R.exe`

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Step 7: Install some necessary packages used by R kernel on ipython notebook

```
install.packages(c('rzmq','repr','IRkernel','IRdisplay'), repos = 'http://irkernel.github.io/', type = 'source
```

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Step 8: After the packages are successfully downloaded and installed. Type this:

```
IRkernel::installspec()
```

```
> IRkernel::installspec()
[InstallKernelSpec] Removing existing kernelspec in C:\Users\manish\AppData\Roaming\jupyter\kernels\ir
[InstallKernelSpec] Installed kernelspec ir in C:\Users\manish\AppData\Roaming\jupyter\kernels\ir
>
```

Step 9: Type quit

```
quit()
```

Step 10: Start your ipython notebook now

```
ipython notebook
```

Congratulations! You've now installed R in your ipython notebook.

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Click on R and start working.

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anon 🛡   **Oct '15**

@indutaneja11 Just to add to what Manish has already stated: if you're primarily an R user and are planning to install Jupyter via
Anaconda, I would recommend Miniconda instead (it's from the same people). It's about a tenth of the size and installs only the most
basic packages, on top of which you can install whatever else you want (using the steps provided above).

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Aarshay   **Apr '16**

Excellent stuff Manish! Thanks for this. 🙂

Manish   **Apr '16**

Thanks @Aarshay 🙂

Hiccup   **Jun '16**

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If you have Anaconda installed on your machine…then just type
conda install -c r r-essentials
on your terminal & it will install R kernal as well as some of the important R packages (like dplyr, ggplot2 etc).
For more details look at this link - **https://www.continuum.io/blog/developer/jupyter-and-conda-r**

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ragesz   **Jun '16**

Does anybody know where the `kernel.json` for R is located? I can find the kernels of my base Anaconda and envs in
"`/user/.../jupyter/kernels/`", in the "`python2`" and "`python3`" subfolders, but no "`r`" subfolder is present here.
Thank you!

Brijesh　　　　　　　　　　　　　　　　　　　　　　　　　**Jun '16**

This is the best way to do it.

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pa1　　　　　　　　　　　　　　　　　　　　　　**Oct 2015 Nov '17**

Another useful link which helped me is **https://conda.io/docs/user-guide/tasks/use-r-with-conda.html** .

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archit18　　　　　　　　　　　　　　　　　　　　　　　　　**Mar '19**

Thanks **@Manish** for this post. it helped me today!

Umairnsr87　　　　　　　　　　　　　　　　　　　　　　　　**Apr '19**

Download the Anaconda's latest version and there is an inbuilt R studio for R programming. Hope it will help

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