

How to use R with Google Colaboratory?

Asked 3 years, 11 months ago Modified 30 days ago Viewed 102k times



Google Colaboratory supports Python version 2.7 and 3.6

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I saw an example how to use Swift in Colab a while ago.



Today, I happened to run



```
!jupyter-kernelspec list
```



And found a new kernel: IRkernel

Available kernels:

```
ir          /usr/local/share/jupyter/kernels/ir
python2     /usr/local/share/jupyter/kernels/python2
python3     /usr/local/share/jupyter/kernels/python3
swift       /usr/local/share/jupyter/kernels/swift
```

Is it now possible to use R in Colab as well? No hassle in installing R kernel?

[r](#) [jupyter-notebook](#) [google-colaboratory](#)

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edited Jan 28, 2021 at 12:22

asked Feb 8, 2019 at 15:10



[korakot](#)

35.4k

15

119


137


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 Yes.125 For a new R-notebook, use [this link](#). You can learn from IRkernel demos, e.g. [demo.ipynb](#) Save a copy in your Google Drive, and make any changes you need. 2 more demos:

- 
- [Display.ipynb](#) shows how to display HTML, images.
 - [Comm Demo.ipynb](#) shows how to communicate between R and JavaScript.

See more details in [IRkernel Github](#).

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edited Jan 1 at 4:26



Peter Harrison

833 8 12

answered Feb 8, 2019 at 15:10



korakot

35.4k 15 119 137

2 So one should use this each time one wants to run R on Google Colab?! Running it does return some warning(about non Google authorised). Is it safe? – [NelsonGon](#) Aug 14, 2019 at 7:01

and how to install R libraries? – [chopin_is_the_best](#) Oct 9, 2019 at 20:17

2 Just call `install.packages("wordcloud")` to install wordcloud library, for example. – [korakot](#) Oct 10, 2019 at 2:24



1 Do you have to re-install the packages each time you load the notebook? – [Jas](#) Apr 11, 2020 at 13:54

2 @Nathan Exactly. 🙄 – [korakot](#) Jun 30, 2020 at 15:28

 In case you want to use Python and R together, you can use R magic for some cells.

50

```
# activate R magic
%load_ext rpy2.ipynthon
```

 Then, whenever you want to use R, you begin the cell with `%%R`

```
%%R
x <- 42
print(x)
```

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edited May 31, 2019 at 13:17

answered Apr 25, 2019 at 13:50



korakot

35.4k 15 119 137

5 you do not need to run `import rpy2` running the `load_ext magic` is sufficient – Buthetleon May 31, 2019 at 12:31

2 OK, I'll take it out then – korakot May 31, 2019 at 13:17

I totally understand that using the magic commands is better than no option at all, but you have to admit that if you wanted to R throughout the entire notebook, is kinda nuts that we would have to add `%%R` to the top over every single code cell one by one. – Btibert3 Oct 21, 2019 at 21:27

1 This answer is only good if you want to mix some R into a Python notebook. If you write mostly R, please use my first answer above. – korakot Oct 22, 2019 at 0:09

Also I have troubles installing packages using this method in Colab. I wanted to install one package, call one function from that package and then work with the results in Python. For some packages it works, for some it does not. I get errors with dependencies e.g. installation of package 'Rmpfr' had non-zero exit status – Paloha Mar 30, 2020 at 12:54



Open this link in your browser to create a new notebook with R Kernel

22

<https://colab.research.google.com/notebook#create=true&language=r>



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answered Dec 17, 2019 at 13:42



Leon Huang

529 6 12



*****Working as of Friday 13th November 2020

12

Go this URL <https://colab.to/r> whilst signed into colab and that should do it.



You can check if R in Runtime -> Change runtime type, but it should already be setup.



Notebook settings

Runtime type
R

Hardware accelerator
None

☐ Omit code cell output when saving this notebook

CANCEL SAVE

To mount google drive:

```
install.packages("googledrive")
library("googledrive")

if (file.exists("/usr/local/lib/python3.6/dist-packages/google/colab/_ipython.py")){
  install.packages("R.utils")
  library("R.utils")
  library("httr")
  my_check <- function() {return(TRUE)}
  reassignInPackage("is_interactive", pkgName = "httr", my_check)
  options(rlang_interactive=TRUE)
}
```

And authenticate google drive

```
drive_auth(use_oob = TRUE, cache = TRUE)
```

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edited Nov 14, 2020 at 23:33

answered Nov 13, 2020 at 20:35



Nosey

644 7 13

I just tried it and it works. However, I still cannot mount my drive. After implementing the code, the "mount drive" drive icon appears on the left panel, but clicking it displays a notification at the bottom left corner that "mounting your google drive is only available on hosted python runtimes". I don't know if there's a workaround, it will be very helpful – [M Terry](#) Nov 16, 2020 at 11:39

Hi, @Nosey, can you explain a little more about the stage to mount the drive? Are you still able to get the url to get the authentication code? it returns "Error: Can't get Google credentials. Are you running googledrive in a non-interactive session? ". I do not see any "mount drive" icon mentioned by MTerry... – [hamagust](#) Apr 14, 2021 at 17:15

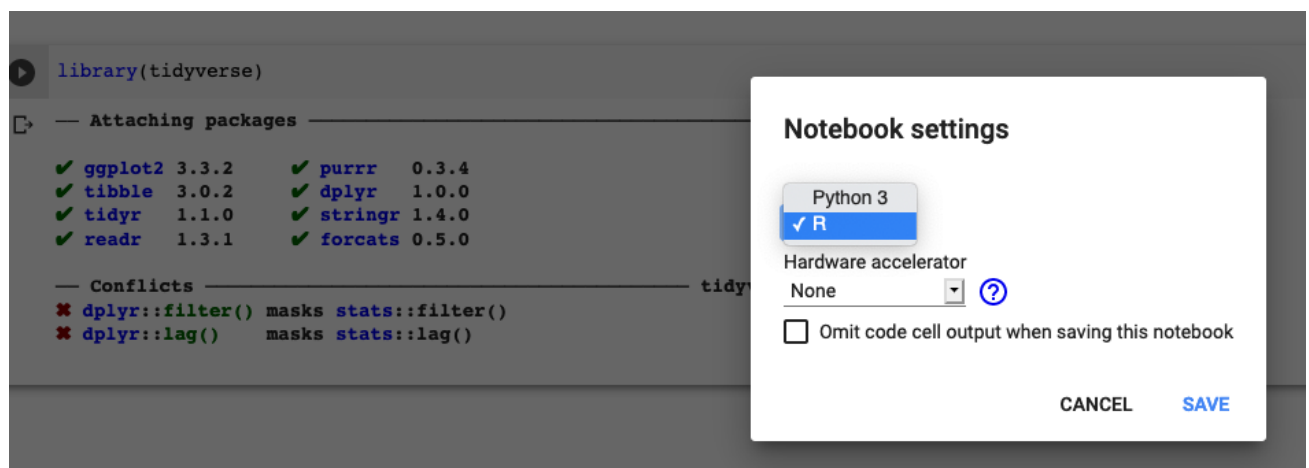
@ hamagust, perhaps see if this file exists? My python 3.6 directory is empty, python 3.7 has this path. It installs the libraries if I change 3.6 to 3.7 but I can't find my files. I think the answer lies here. I will return when I have time. Please let us know if you solve. – [Nosey](#) Apr 16, 2021 at 15:03 ✎

Update: this doesn't work anymore (july 2020).

5 The above link on answers above takes directly to R notebook, there you have an option change between R or python. It is strange that Google is changing services just like this. Hence stackoverflow not a great platform to promote tools created by profit mongering/data-selling companies.



Old answer:



As of now if you click at Runtime on menu bar then choose Change Runtime Type , you can choose between R or Python.



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Run after ⌘/Ctrl+F10

Interrupt execution ⌘/Ctrl+M I

Restart runtime... ⌘/Ctrl+M .

Restart and run all...

Factory reset runtime

Change runtime type

Manage sessions

View runtime logs

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edited Nov 3, 2020 at 10:10

answered Apr 24, 2020 at 7:54



David Arenburg

90.7k

17

136

195



x85ms16

547

7

17

3 When we click on change runtime type in a new notebook, we just can change the Hardware accelerator option. Any suggestions? – Luis Jul 15, 2020 at 0:52

2 It looks like google removed the option to change kernel. Let me dig around and get back to it. – x85ms16 Jul 15, 2020 at 5:22

Thank you so much. It seems Google is forcing us to use python in google colab. – Luis Jul 15, 2020 at 23:49



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To expand on a previous answer, here's how you can move dataframes between the R and Python kernels so you can work with both in the same notebook (for example, if you want to load data in with Pandas, process it with an R package, and then plot it with Bokeh).





```
%load_ext rpy2.ipynthon
%R -i df
```

```
# R data frame to Pandas dataframe
%R seq.data <- read.delim('sequence.index', header=TRUE, stringsAsFactors=FALSE)
seq_data = %R seq.data
```

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edited Jul 28, 2020 at 15:52

answered Jul 9, 2020 at 17:12



[rchurt](#)

1,303

1 10 19



0



Another quick way is to replace postix, .ipynb in colab title to .r
Example: change name of Untitled.ipynb to Untitled.r, and everything works perfectly!

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answered Dec 12, 2020 at 17:40



[pari](#)

750

8 12

1 I've just tried to do so with working .ipynb notebook, and it didn't help... Does the runtime have to change automatically? – [TopCoder2000](#) May 4, 2021 at 12:59