# Google Colaboratory与微软的Python Notebook

John, 2018-12-30

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| Step | GOOLGE (all works) | MICROSOFT |
| Link | <https://colab.research.google.com/notebooks> | <https://notebooks.azure.com/wangjun-sh/projects/testRPython>  <https://testrpython-wangjunsh.notebooks.azure.com/j/lab>  <https://testrpython-wangjunsh.notebooks.azure.com/j/tree> |
| Get system info | !Uname –a  !cat /proc/version  !lsb\_release –a  Ubuntu 18 LTS | Ubuntu 16 LTS |
| checkR | 检查是否有R  !R --version  !apt-get –verion  !pip3 --version | 自带微软自己的R了 |
| Install R | 在Ubuntu上安装 R  !apt-get r-base |  |
| Run R | 运行R  !R |  |
| 安装IRkernel | 安装IRkernel  install.packages('IRkernel')  IRkernel::installspec() # to register the kernel in the current R installation  q() # 退出R | jupyter kernelspec list  conda 升级后把python 升级到3.7了，所以再次安装ipykernel  ./python3 –m pip show ipykernel  ./python3 –m pip install ipykernel |
|  | !apt-get install build-essential 已是最新的。 |  |
| 安装tidyverse | !apt-get install libcurl4-openssl-dev libssl-dev #为tidyverse准备 |  |
|  | R  install.packages("Rcpp") |  |
|  | R  install.packages("tidyverse")  library(tidyverse) | R  Install.packages(“tidyverse”)  Install.packages(“haven”) |
|  | !pip install -y rpy2  !pip install –y tzlocal  Pandas自带  !pip install –y plotnine | !conda install -y rpy2  !conda install –y tzlocal  simplegeneric  pandas  plotnine |
|  | 在python notebook中，头部运行  import rpy2.rinterface  %load\_ext rpy2.ipython | 在python notebook中，头部运行  Import readline  Import rpy2.robjects  import rpy2.rinterface  %load\_ext rpy2.ipython  出错，微软的R是阉割版的。少stats.so动态链接库。  Matrix products: default  BLAS: /usr/local/lib/R/lib/libRblas.so  LAPACK: /usr/local/lib/R/lib/libRlapack.so  Matrix products: default  BLAS: /opt/microsoft/ropen/3.4.1/lib64/R/lib/libRblas.so  LAPACK: /opt/microsoft/ropen/3.4.1/lib64/R/lib/libRlapack.so  ~~!Export PATH=”/opt/microsoft/ropen/3.4.1/lib64/R/lib/:$PATH”~~  ~~!export LD\_LIBRARY\_PATH="/usr/lib/lapack/:$LD\_LIBRARY\_PATH"~~  ldd /opt/microsoft/ropen/3.4.1/lib64/R/library/stats/libs/stats.so  解决方法为：  import sys  sys.path.append("/opt/microsoft/ropen/3.4.1/lib64/R/lib/")  print(sys.path)  重新安装 rlang, dplyr, ggplot2 |
| 查看mtcars | %%R  library(tidyverse)  head(mtcars) |  |
| 测试ggplot2 | %%R  p <-ggplot(data=mtcars,mapping=aes(x=mpg,y=disp,color=cyl)) +  geom\_point()  p |  |
| Limitation | 没有单独的R notebook  只有python notebook | R是微软的版本  有时候notebook关闭了进不去，需要清空cookie, 刷新浏览器。 |
| advantage | 界面优秀简洁 | 有python notebook 和R notebook |