

Getting started with Jupyter notebooks

CS3200 Database design (sp18 s2)

<https://course.ccs.neu.edu/cs3200sp18s2/>

Version 2/8/2018

Screenshots

This setup tutorial complements (but does not supplement) our install instructions on our datalab github page with some screenshots:

<https://github.com/northeastern-datalab/databasedesign>

1. Getting started with
MAC OS

Download Anaconda for Python 2.7

https://www.anaconda.com/download/#macos



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Anaconda 5.0.1 For macOS Installer

Python 3.6 version *

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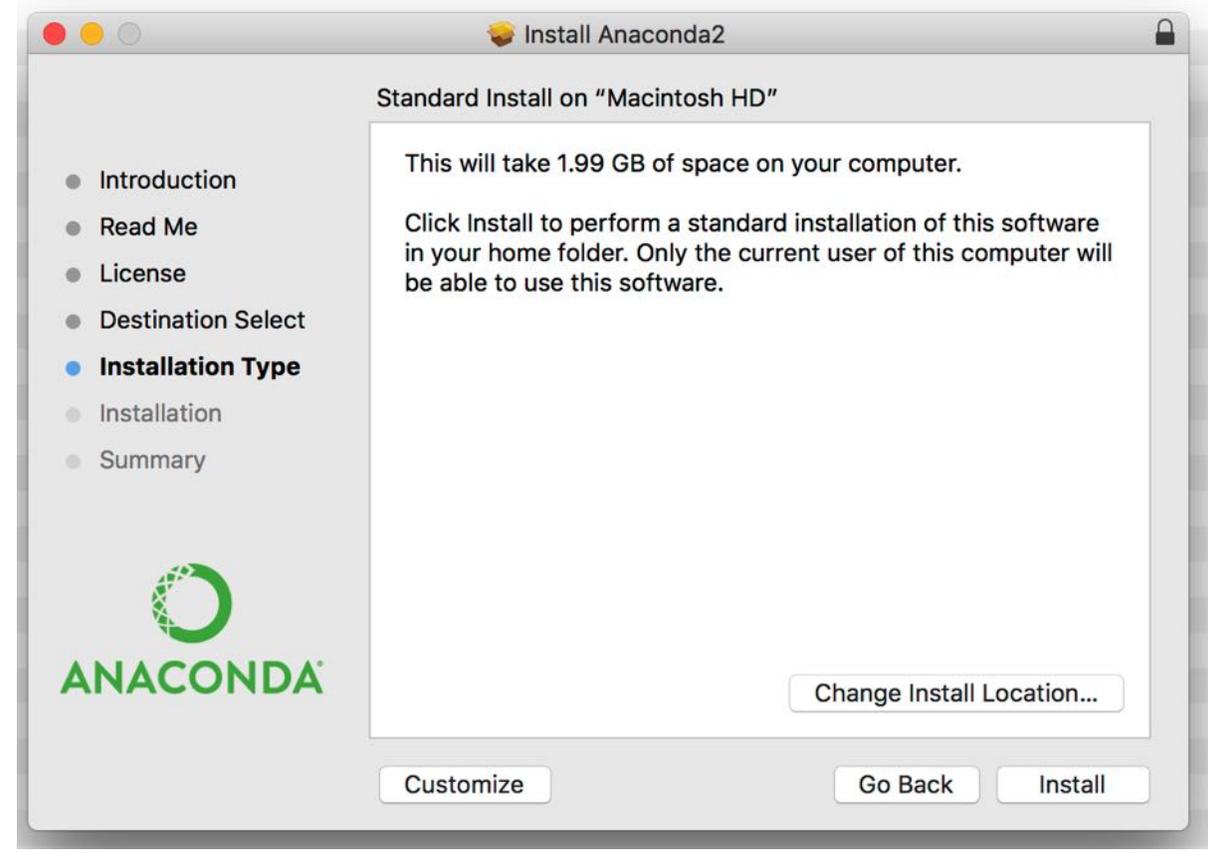
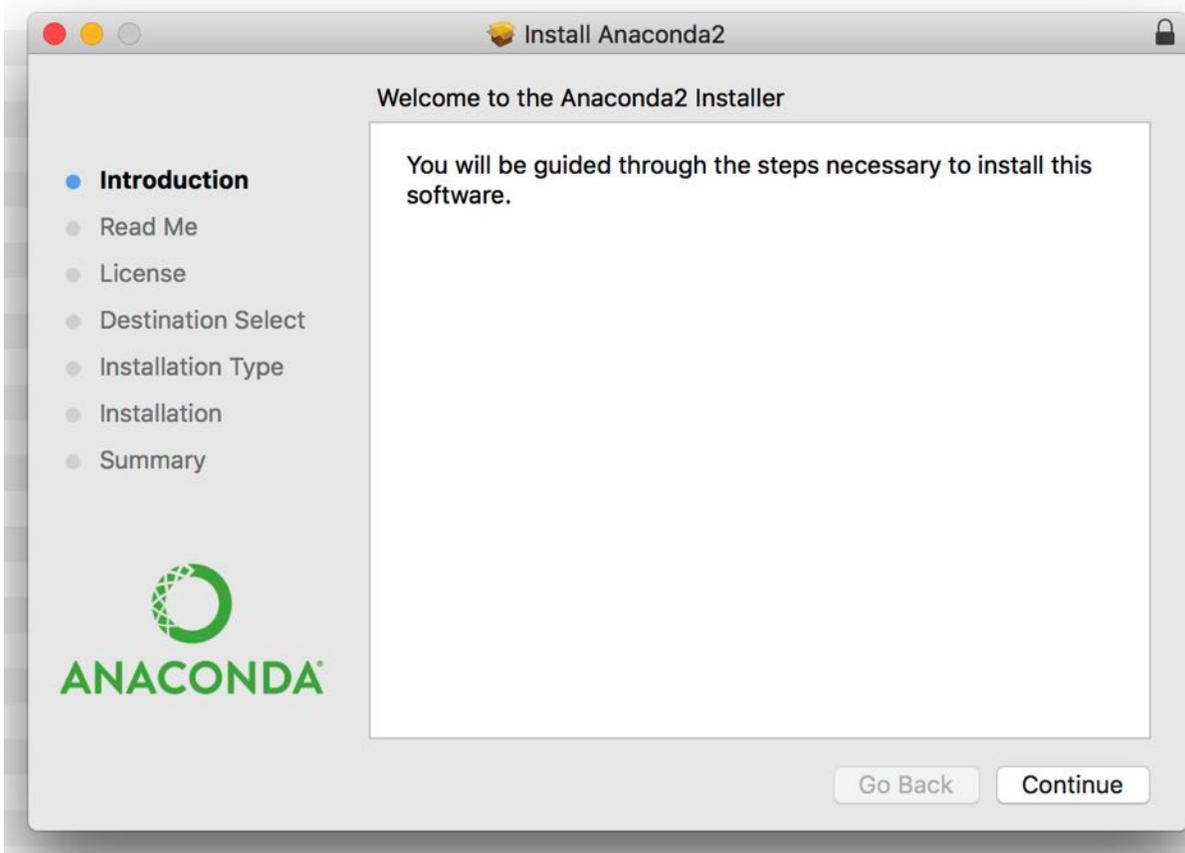
Python 2.7 version *

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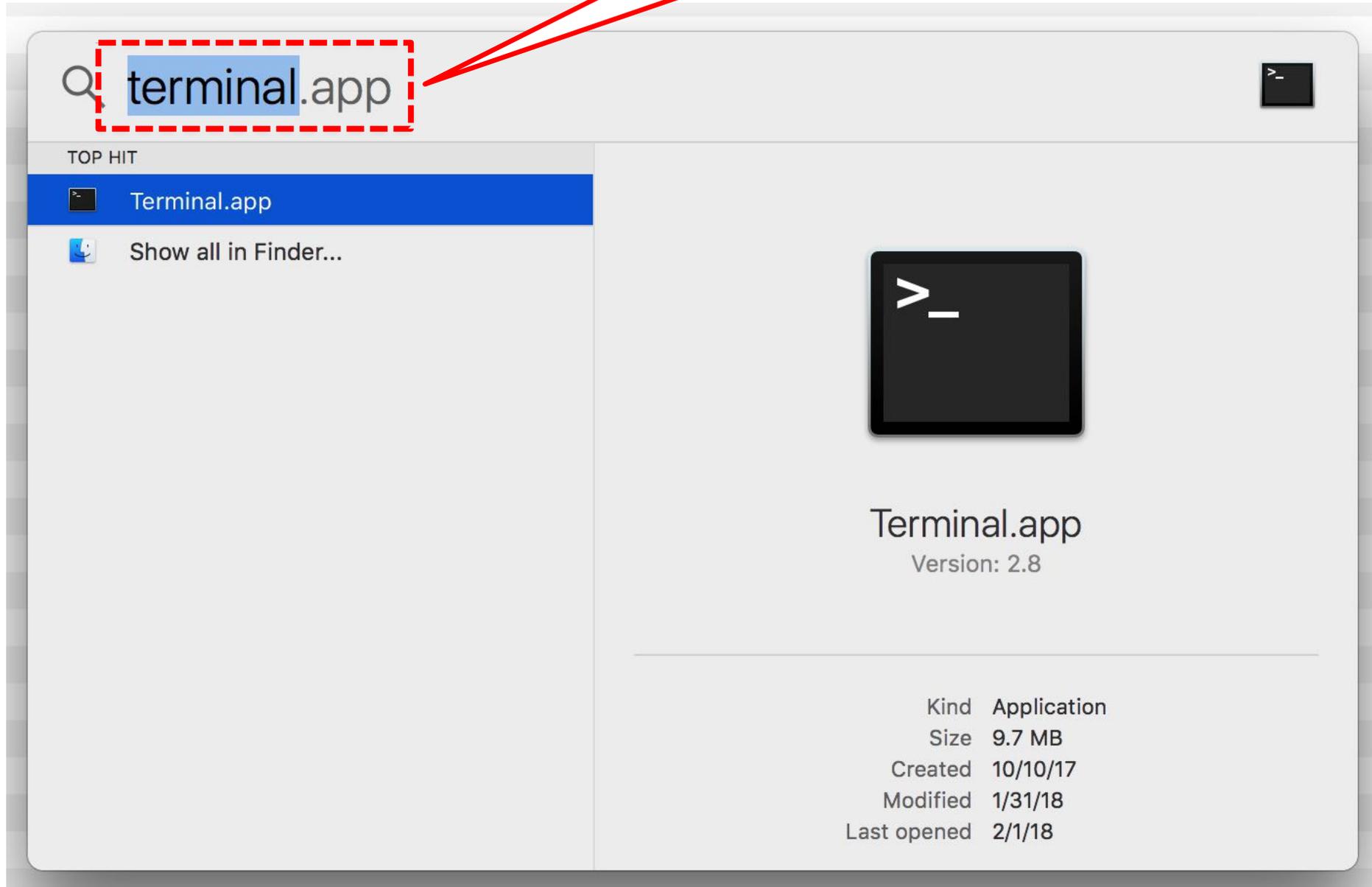
[*How to get Python 3.5 or other Python versions](#)
[How to Install ANACONDA](#)

Follow the instructions



Start the terminal

Spotlight shortcut CMD + Space
Then "terminal"



Install ipython-sql from the terminal with:
`conda install -c conda-forge ipython-sql`

```
gatter — -bash — 80x24
Last login: Sun Feb  4 10:22:33 on ttys000
Wolfgangs-MacBook-Pro-9:~ gatter$ conda install -c conda-forge ipython-sql
```

```
gatter — conda install -c conda-forge ipython-sql — 80x24
Last login: Sun Feb  4 10:22:33 on ttys000
Wolfgangs-MacBook-Pro-9:~ gatter$ conda install -c conda-forge ipython-sql
Fetching package metadata .....
Solving package specifications: .

Package plan for installation in environment /Users/gatter/anaconda2:

The following NEW packages will be INSTALLED:

  ipython-sql: 0.3.6-py27_1      conda-forge
  prettytable: 0.7.2-py27_1     conda-forge
  sqlparse:    0.2.4-py_0                   conda-forge

The following packages will be UPDATED:

  conda:          4.3.30-py27h407ed3a_0      --> 4.3.33-py27_0 conda-forge

The following packages will be SUPERSEDED by a higher-priority channel:

  conda-env:     2.6.0-h36134e3_0          --> 2.6.0-0       conda-forge

Proceed ([y]/n)?
```

Download git

Browser address bar: `https://git-scm.com/downloads`

git --distributed-is-the-new-centralized

Search entire site...

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The entire **Pro Git book** written by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

Downloads

Mac OS X Windows
Linux/Unix

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Git via Git

If you already have Git installed, you can get the latest development version via Git itself:

```
git clone https://github.com/git/git
```

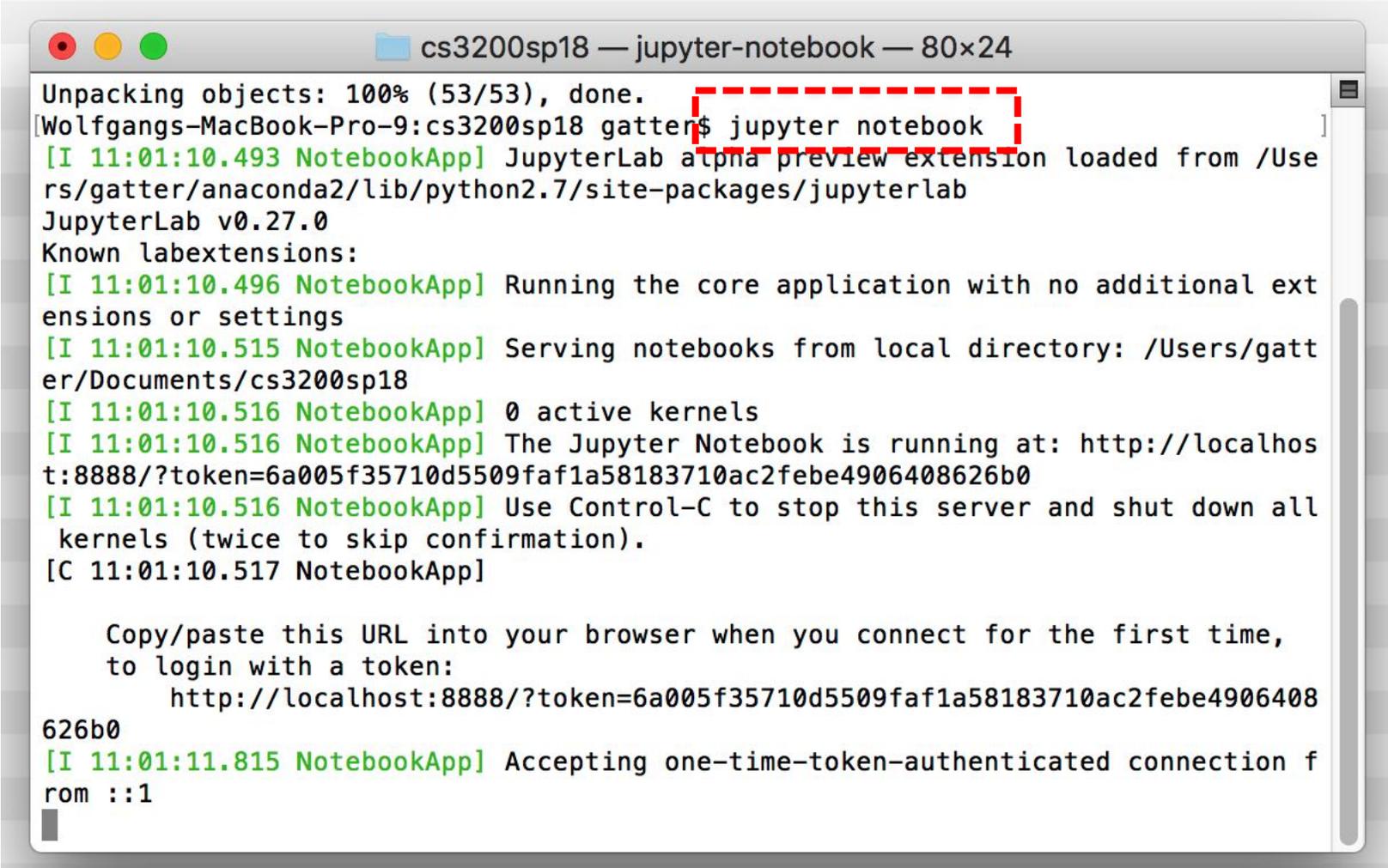
You can also always browse the current contents of the git repository using the [web interface](#).

Clone our file repository into your preferred directory

```
cs3200sp18 — -bash — 80x24
Last login: Sun Feb  4 10:31:29 on ttys000
Wolfgang-MacBook-Pro-9:~ gatter$ cd /Users/gatter/Documents/cs3200sp18
Wolfgang-MacBook-Pro-9:cs3200sp18 gatter$ git clone https://github.com/northeastern-datalab/databasesdesign
```

```
cs3200sp18 — -bash — 80x24
Last login: Sun Feb  4 10:31:29 on ttys000
Wolfgang-MacBook-Pro-9:~ gatter$ cd /Users/gatter/Documents/cs3200sp18
Wolfgang-MacBook-Pro-9:cs3200sp18 gatter$ git clone https://github.com/northeastern-datalab/databasesdesign
Cloning into 'databasesdesign'...
remote: Counting objects: 53, done.
remote: Compressing objects: 100% (28/28), done.
remote: Total 53 (delta 21), reused 51 (delta 19), pack-reused 0
Unpacking objects: 100% (53/53), done.
Wolfgang-MacBook-Pro-9:cs3200sp18 gatter$
```

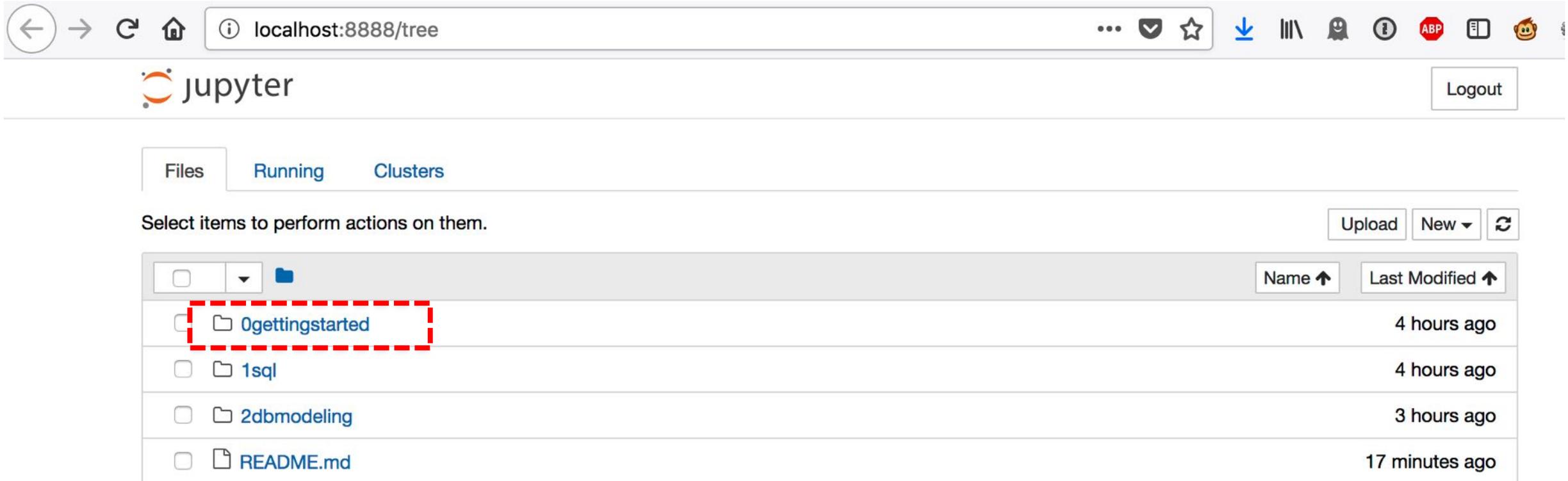
Start Jupyter

A terminal window titled "cs3200sp18 — jupyter-notebook — 80x24" showing the output of the command "jupyter notebook". The output includes status messages from the NotebookApp, such as "Unpacking objects: 100% (53/53), done.", "JupyterLab alpha preview extension loaded from /Users/gatter/anaconda2/lib/python2.7/site-packages/jupyterlab", "JupyterLab v0.27.0", "Running the core application with no additional extensions or settings", "Serving notebooks from local directory: /Users/gatter/Documents/cs3200sp18", "0 active kernels", "The Jupyter Notebook is running at: http://localhost:8888/?token=6a005f35710d5509faf1a58183710ac2febe4906408626b0", and "Use Control-C to stop this server and shut down all kernels (twice to skip confirmation)". A red dashed box highlights the command prompt and the command "jupyter notebook".

```
cs3200sp18 — jupyter-notebook — 80x24
Unpacking objects: 100% (53/53), done.
[Wolfgangs-MacBook-Pro-9:cs3200sp18 gatter]$ jupyter notebook
[I 11:01:10.493 NotebookApp] JupyterLab alpha preview extension loaded from /Users/gatter/anaconda2/lib/python2.7/site-packages/jupyterlab
JupyterLab v0.27.0
Known labextensions:
[I 11:01:10.496 NotebookApp] Running the core application with no additional extensions or settings
[I 11:01:10.515 NotebookApp] Serving notebooks from local directory: /Users/gatter/Documents/cs3200sp18
[I 11:01:10.516 NotebookApp] 0 active kernels
[I 11:01:10.516 NotebookApp] The Jupyter Notebook is running at: http://localhost:8888/?token=6a005f35710d5509faf1a58183710ac2febe4906408626b0
[I 11:01:10.516 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 11:01:10.517 NotebookApp]

Copy/paste this URL into your browser when you connect for the first time,
to login with a token:
    http://localhost:8888/?token=6a005f35710d5509faf1a58183710ac2febe4906408626b0
[I 11:01:11.815 NotebookApp] Accepting one-time-token-authenticated connection from ::1
```

Now you can navigate through the activities in your browser



The screenshot shows the JupyterLab web interface in a browser. The address bar displays `localhost:8888/tree`. The Jupyter logo and a "Logout" button are visible in the top navigation bar. Below the navigation bar, there are three tabs: "Files", "Running", and "Clusters". The "Files" tab is active, and the text "Select items to perform actions on them." is displayed. To the right of this text are buttons for "Upload", "New", and a refresh icon. The main content area shows a file browser view with a table of files and folders. The first folder, "0gettingstarted", is highlighted with a red dashed box. The table has columns for "Name" and "Last Modified".

<input type="checkbox"/>	Name ↑	Last Modified ↑
<input type="checkbox"/>	0gettingstarted	4 hours ago
<input type="checkbox"/>	1sql	4 hours ago
<input type="checkbox"/>	2dbmodeling	3 hours ago
<input type="checkbox"/>	README.md	17 minutes ago

Files Running Clusters

Select items to perform actions on them.

Upload New ↕ ↻

📁 / 0gettingstarted		Name ↑	Last Modified ↑
<input type="checkbox"/>	..		seconds ago
<input type="checkbox"/>	📄 Activity-01.ipynb		4 hours ago

Welcome to our first IPython notebook!

Time to get on with it and print the ceremonial "Hello world!"

To execute a cell, click (or double-click) on it, and then use **SHIFT+ENTER** (or the Run button) to execute the contents of the cell, and move down to the next one!

There are other useful keyboard commands (see the Help menu) and the menu bar can always be used instead as well

In [1]: `print "Hello world!"`

Hello world!

Now, for advanced users only:

```
In [*]: import sys, time
message = "HELLO WORLD!"

L = len(message)
for i in range(100):
    time.sleep(0.1)
    j = i % L
    if j > 0:
        sys.stdout.write("\r" + message[-j:] + " " + message[:L-j])
    else:
        sys.stdout.write("\r" + message)
    sys.stdout.flush()
```

LD! HELLO WOR

In []:

Double click on a cell
Then use "SHIFT + ENTER"

2. Getting started with Windows



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Anaconda 5.0.1 For Windows Installer

Python 3.6 version *

Download

[64-Bit Graphical Installer \(515 MB\)](#) ?
[32-Bit Graphical Installer \(420 MB\)](#)

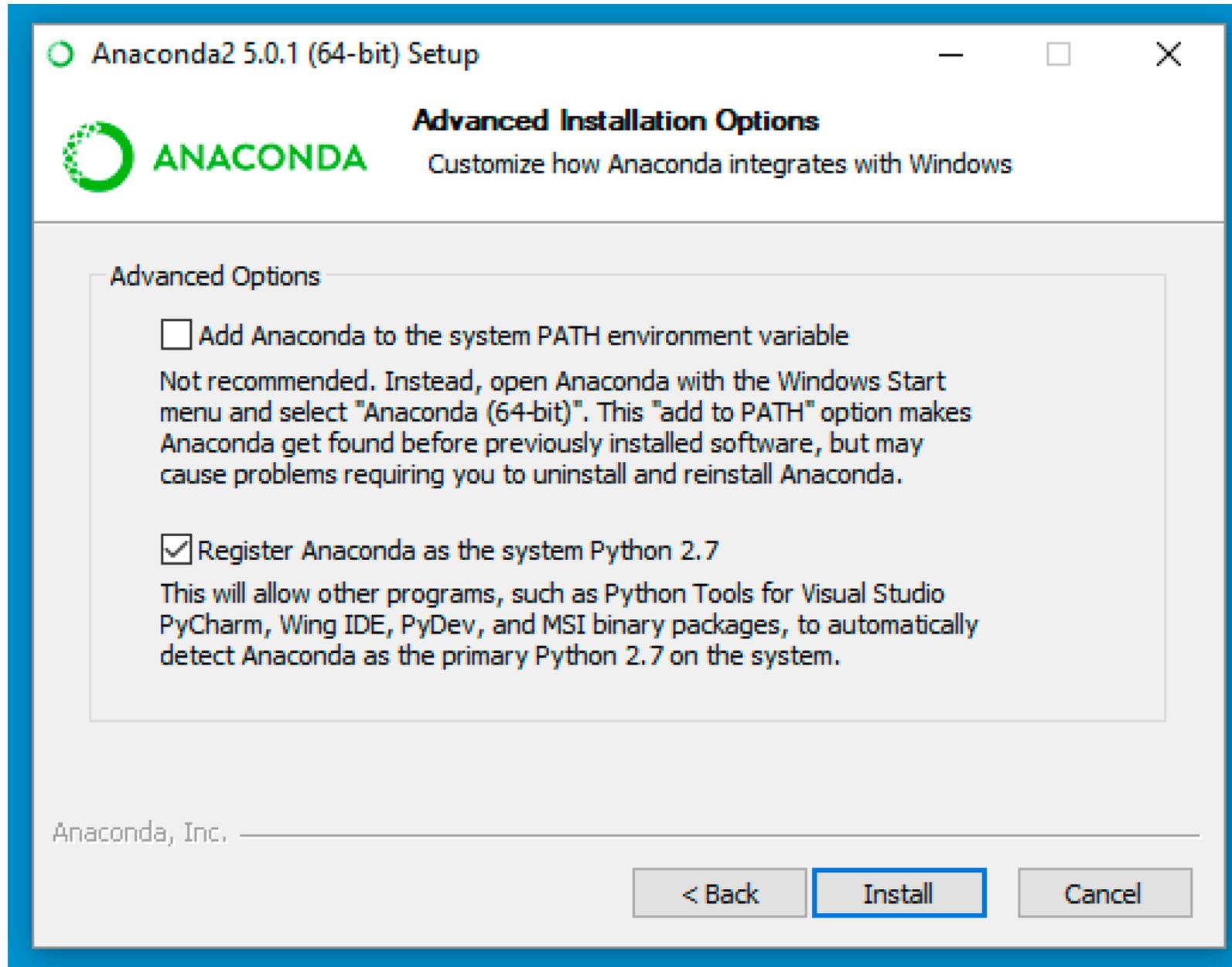
Python 2.7 version *

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[32-Bit Graphical Installer \(403 MB\)](#)

Download 2.7

Follow the instructions



Search in windows, anaconda right click and start in the administrator mode.

Start the Anaconda Prompt

Write:- `jupyter notebook`

```
Anaconda Prompt - conda install -c conda-forge ipython-sql
(C:\ProgramData\Anaconda3) C:\Users\Rohit>jupyter notebook
[I 23:41:50.797 NotebookApp] JupyterLab alpha preview extension loaded from C:\ProgramData\Anaconda3\lib\site-packages\jupyterlab
JupyterLab v0.27.0
Known labextensions:
[I 23:41:50.813 NotebookApp] Running the core application with no additional extensions or settings
[I 23:41:50.953 NotebookApp] Serving notebooks from local directory: C:\Users\Rohit
[I 23:41:50.953 NotebookApp] 0 active kernels
[I 23:41:50.953 NotebookApp] The Jupyter Notebook is running at: http://localhost:8888/?token=b1885c830c7e628bfe588309c6a85ba9f807c13eba447e48
[I 23:41:50.953 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 23:41:50.969 NotebookApp]

Copy/paste this URL into your browser when you connect for the first time,
to login with a token:
    http://localhost:8888/?token=b1885c830c7e628bfe588309c6a85ba9f807c13eba447e48
[I 23:41:51.162 NotebookApp] Accepting one-time-token-authenticated connection from ::1
[I 23:42:05.989 NotebookApp] Interrupted...
[I 23:42:05.989 NotebookApp] Shutting down kernels

(C:\ProgramData\Anaconda3) C:\Users\Rohit>conda install -c conda-forge ipython-sql
Fetching package metadata ...
```

Install `ipython-sql` from the terminal with:
`conda install -c conda-forge ipython-sql`

Download git

Browser address bar: `https://git-scm.com/downloads`

git --distributed-is-the-new-centralized

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Downloads

Mac OS X Windows
Linux/Unix

Older releases are available and the Git source repository is on GitHub.

Latest source Release
2.16.1
Release Notes (2018-01-22)
Download 2.15.1 for Mac

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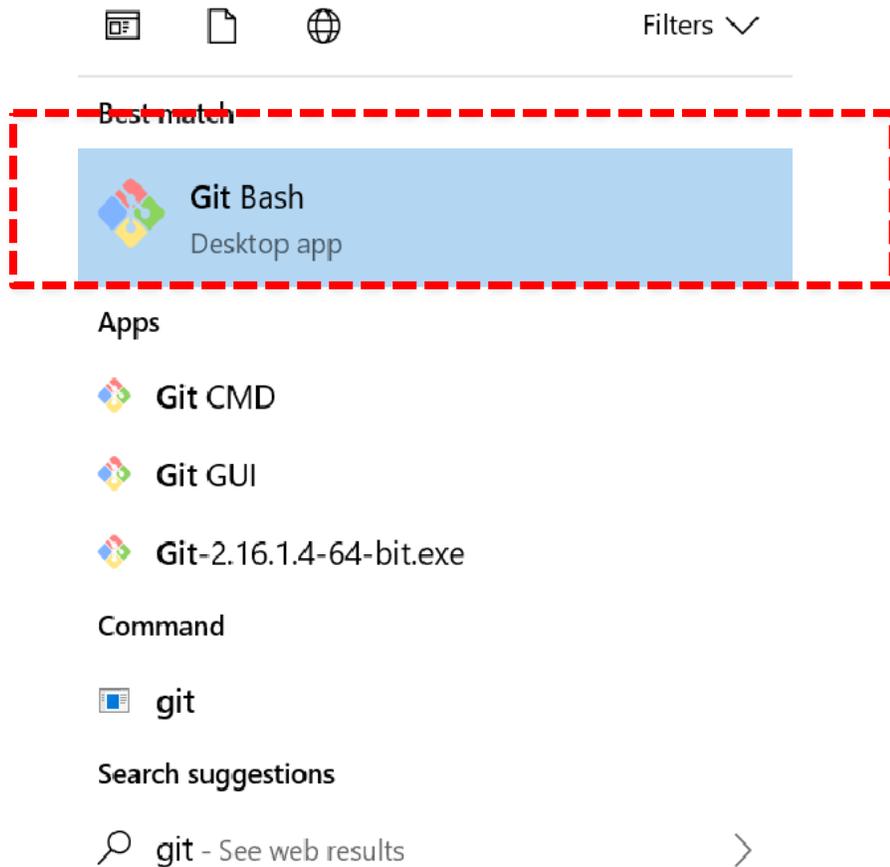
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```

You can also always browse the current contents of the git repository using the [web interface](#).

Clone our file repository into your preferred directory



Search in windows for Git Bash which will look like the icon on the left

```
MINGW64:/c/Users/saket/Desktop

saket@Sage-X MINGW64 ~/Desktop
$ saket@Sage-X MINGW64 ~/Desktop
bash: saket@Sage-X: command not found

saket@Sage-X MINGW64 ~/Desktop
$ $ ;s
bash: $: command not found
bash: s: command not found

saket@Sage-X MINGW64 ~/Desktop
$ bash: syntax error near unexpected token `;'
> c
> saket@Sage-X MINGW64 ~/Desktop
> $ ls
> '~$economic decision making.xlsx' 'economic decision making.xlsx'
> desktop.ini
>
> saket@Sage-X MINGW64 ~/Desktop
> $ git clone
^C
saket@Sage-X MINGW64 ~/Desktop
$ git clone https://github.com/northeastern-data1ab/databasesdesign.git
```

Navigate to the folder to which you want to clone the repo

Now you can navigate through the activities in your browser



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<input type="checkbox"/>	Name	Last Modified
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