

# INSTALLATION INSTRUCTIONS FOR IPYTHON ENVIRONMENT

ENGL-S3024  
Computational  
Methods for  
Literary and  
Cultural  
Criticism

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# OVERVIEW

- Why am I doing this?
  - Installing python and its libraries for the first time can be troublesome (severe understatement)
  - The kind people in Columbia's Center for New Media Teaching and Learning (CCNMTL) have built a "python in a box" solution to make it easier
- General Idea:
  - Using two applications (Virtual Box and Vagrant) create a little virtual computer inside of your actual computer that runs LINUX UBUNTU (a different operating system)
  - Have python and all the key libraries already installed on that little virtual computer
  - Run ipython-notebook off of that little virtual computer, but have ipython-notebook connect to the local browser on your computer for the graphical interface
  - Have some nicely synced up folders that make file transfer easy

**STEPS TO DO THE FIRST  
TIME YOU ARE  
SETTING UP**

# STEP 1: INSTALL VIRTUAL BOX

- <http://www.virtualbox.org/>



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## VirtualBox

### Download VirtualBox

Here, you will find links to VirtualBox binaries and its source code.

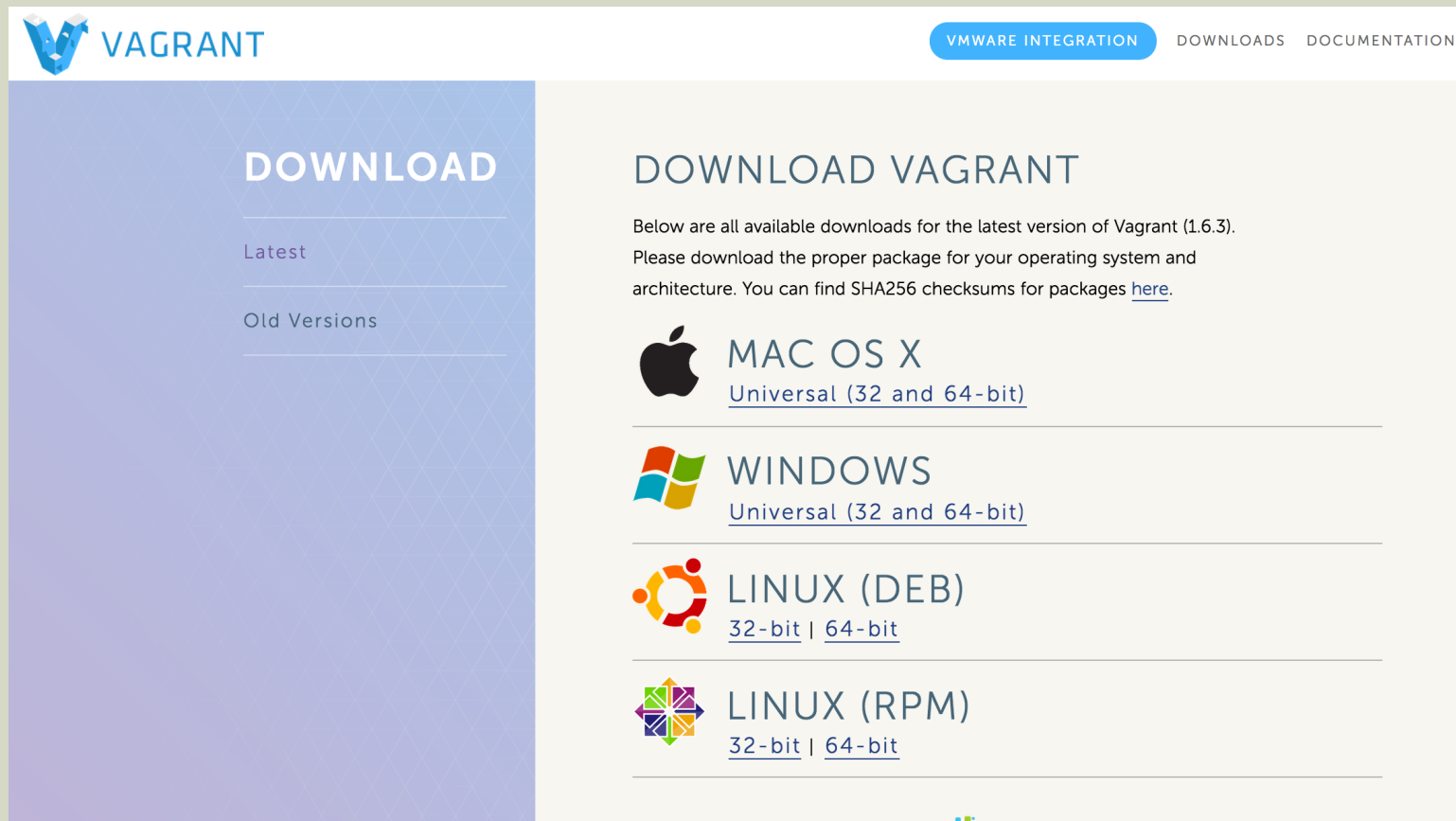
#### VirtualBox binaries

By downloading, you agree to the terms and conditions of the respective license.

- **VirtualBox platform packages.** The binaries are released under the terms of the GPL version 2.
  - **VirtualBox 4.3.12 for Windows hosts** ⇨ [x86/amd64](#)
  - **VirtualBox 4.3.12 for OS X hosts** ⇨ [x86/amd64](#)
  - **VirtualBox 4.3.12 for Linux hosts**
  - **VirtualBox 4.3.12 for Solaris hosts** ⇨ [amd64](#)
- **VirtualBox 4.3.12 Oracle VM VirtualBox Extension Pack** ⇨ [All supported platforms](#)  
Support for USB 2.0 devices, VirtualBox RDP and PXE boot for Intel cards. See [this chapter from the Extension Pack](#). The Extension Pack binaries are released under the [VirtualBox Personal Use and Ev](#)  
*Please install the extension pack with the same version as your installed version of VirtualBox!*  
*If you are using **VirtualBox 4.2.24**, please download the extension pack ⇨ [here](#).*  
*If you are using **VirtualBox 4.1.32**, please download the extension pack ⇨ [here](#).*  
*If you are using **VirtualBox 4.0.24**, please download the extension pack ⇨ [here](#).*
- **VirtualBox 4.3.12 Software Developer Kit (SDK)** ⇨ [All platforms](#)

# STEP 2: INSTALL VAGRANT

- <http://www.vagrantup.com/>



The screenshot shows the Vagrant website's download page. The header includes the Vagrant logo and navigation links for 'VMWARE INTEGRATION', 'DOWNLOADS', and 'DOCUMENTATION'. A left sidebar on a blue background contains 'DOWNLOAD' and 'Old Versions' links. The main content area is titled 'DOWNLOAD VAGRANT' and lists four download options: Mac OS X (Universal), Windows (Universal), Linux (DEB) (32-bit and 64-bit), and Linux (RPM) (32-bit and 64-bit). Each option includes its respective logo and a link to the download.

**VAGRANT** VMWARE INTEGRATION DOWNLOADS DOCUMENTATION





## DOWNLOAD

Latest

Old Versions

## DOWNLOAD VAGRANT

Below are all available downloads for the latest version of Vagrant (1.6.3). Please download the proper package for your operating system and architecture. You can find SHA256 checksums for packages [here](#).

-  **MAC OS X**  
[Universal \(32 and 64-bit\)](#)
-  **WINDOWS**  
[Universal \(32 and 64-bit\)](#)
-  **LINUX (DEB)**  
[32-bit](#) | [64-bit](#)
-  **LINUX (RPM)**  
[32-bit](#) | [64-bit](#)

# EXTRA STEP: ONLY FOR WINDOWS USERS

- On Windows, you should also install ssh software. Cywin, PuTTY, or Git are all viable options.

CYWIN: <https://www.cygwin.com/>

PUTTY: <http://www.putty.org/>

Git: <http://git-scm.com/download/win>

- Git is probably the simplest. Upon install, the Git installer will prompt you to choose how to "Adjust your Path environment." Select the bottom option: "Run Git and included Unix tools from the Windows Command Prompt".

# STEP 3: GET ZIP FILE ON COURSEWORKS

- Go to Courseworks >> Files and Resources >> Software
- Download “DH-METHODS.zip”
- Unzip it, resulting in the “DH-METHODS” folder. Put that folder somewhere convenient where you will keep in from now on.

Download

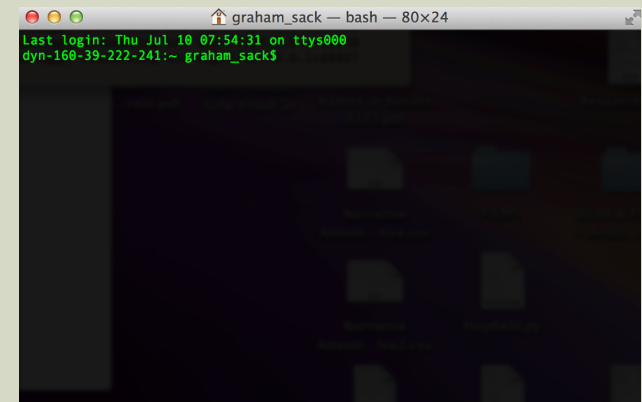
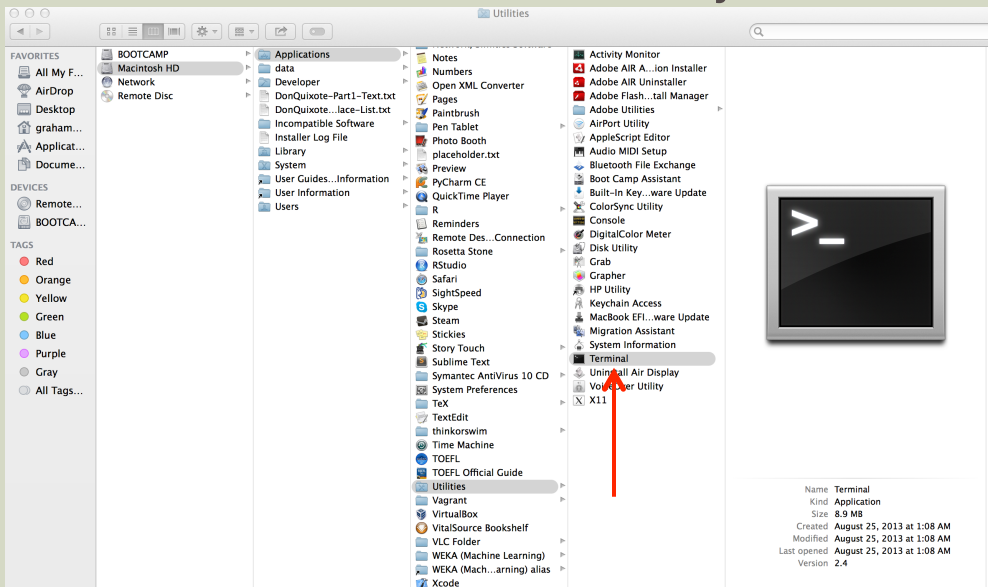
The screenshot shows the COURSEWORKS@COLUMBIA interface for the course ENGLS3024\_001\_2014\_2: Comp Mthd Lit & Cult Criticis (Summer 2014). The 'Files & Resources' section is active, showing the location: ENGLS3024\_001\_2014\_2 Resources / Software. A file list is displayed with the following items:

Title	Actions	Enti
Software	Add	Enti
DH-METHODS.zip	Actions	Enti
Intelligent-Archive	Actions	Enti
IPython-Installation-Instructions.pdf	Actions	Enti

A red arrow points from the word 'Download' to the 'DH-METHODS.zip' file in the list.

# EXTRA STEP: ONLY IF YOU'VE NEVER USED TERMINAL ON MAC BEFORE

- You are used to using the graphical user interface (GUI) on your mac. But you can also interact with your computer using “command line” (pure text interface).
- On Mac, You do this via an application called TERMINAL
- For most users, this will be in: Applications >> Utilities
- Just double click it like you would any other app





# EXTRA STEP: ONLY IF YOU DON'T KNOW HOW TO FIND A "FILEPATH"

- Filepath just means the sequence of folders and subfolders you need to navigate through to get to a file on your computer
- On Mac, you can easily figure out the filepath for a file or folder by dragging that folder into the terminal window

**Click and drag folder into open Terminal window**

**Filepath should just appear**

```
graham_sack — bash — 80x24
Last login: Thu Jul 10 07:54:31 on ttys000
dyn-160-39-222-241:~ graham_sack$
```

```
graham_sack — bash — 123x51
graham-sacks-macbook-2:Vagrant graham_sack$ cd /Users/graham_sack/Desktop/DH-METHODS/ipython-notebook/Vagrant
graham-sacks-macbook-2:Vagrant graham_sack$ ls
Vagrantfile  bootstrap.sh  notebooks
graham-sacks-macbook-2:Vagrant graham_sack$ vagrant up[]
```

# STEP 4: NAVIGATE TO WHERE THE VAGRANTFILE IS

- Open up Terminal
- Get the full filepath leading to the Vagrant folder inside of the DH-Methods folder. The filepath should look sort of like this. (The beginning of the filepath will depend on where you put the folder):

`/Users/graham_sack/Desktop/DH-METHODS/ipython-notebook/Vagrant`

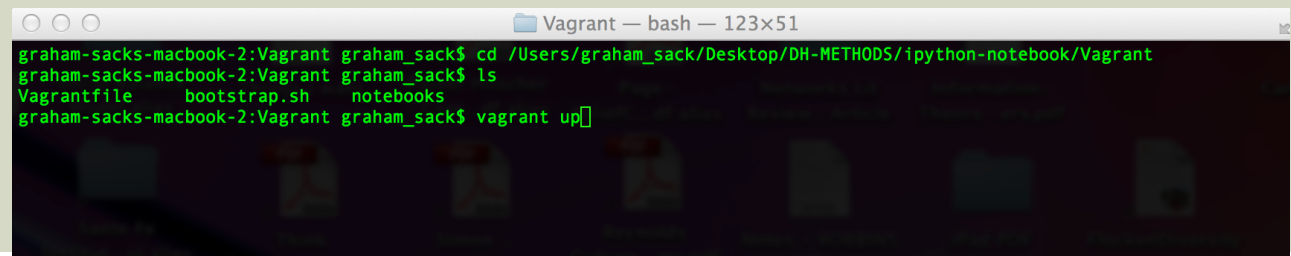
[Neat trick for Mac users: rather than typing in the full path, you can just drag the Vagrant folder into the terminal window and it will write the full filepath for you]

- Change directory to the Vagrant folder

```
>> cd /Users/graham_sack/Desktop/DH-METHODS/ipython-notebook/Vagrant
```

- Check it has the “Vagrantfile” in it by listing the contents of the Vagrant folder

```
>> ls
```



```
Vagrant — bash — 123x51
graham-sacks-macbook-2:Vagrant graham_sack$ cd /Users/graham_sack/Desktop/DH-METHODS/ipython-notebook/Vagrant
graham-sacks-macbook-2:Vagrant graham_sack$ ls
Vagrantfile  bootstrap.sh  notebooks
graham-sacks-macbook-2:Vagrant graham_sack$ vagrant up
```

# STEP 5: DOWNLOAD THE VAGRANT BOX

Type this in to command line:

```
>> vagrant up
```

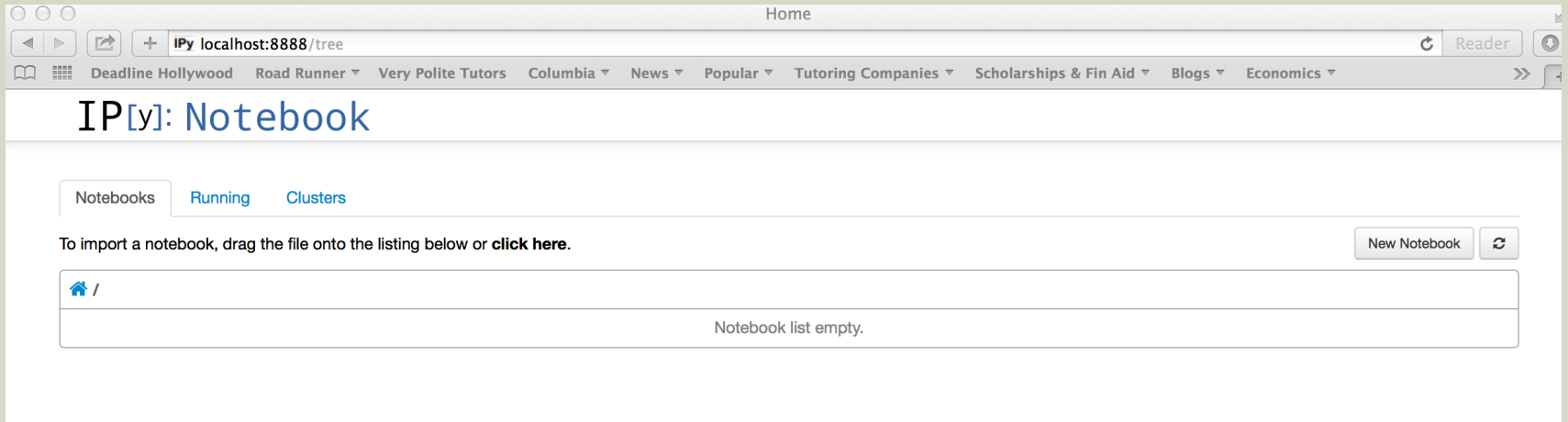
It will now download a big (1 GB) file to your computer. This may take a while.

```
graham-sacks-macbook-2:vagrant graham_sack$ vagrant up  
Bringing machine 'default' up with 'virtualbox' provider...  
=> default: Importing base box 'ipython-notebook'...  
=> default: Matching MAC address for NAT networking...
```

Once this has downloaded, the hard part is over.

# STEP 6: OPEN IPYTHON-NOTEBOOK

Go to your favorite web browser (e.g., safari or google chrome)  
In the address bar type: “localhost:8888/”



You are in ipython notebook! Yay!

**THINGS TO DO ON AN  
ONGOING BASIS AFTER  
INITIAL INSTALLATION**

# LAUNCHING I-PYTHON

1. Open Terminal
2. Go to the directory containing the Vagrantfile

**For example:**

```
>> cd /Users/graham_sack/Desktop/DH-METHODS/ipython-notebook/  
vagrant/
```

3. Type the following in Terminal:

```
>> vagrant up
```

It will take about 30 seconds to load.

4. Open your browser and put “localhost:8888” in the address line

# ADD MORE TUTORIALS

COURSEWORKS@COLUMBIA

ENGLS3024\_001\_2014\_2: Comp Mhd Lit & Cult Critics (Summer 2014) View Site As: -- Select Role --

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Location: ENGLS3024\_001\_2014\_2 Resources

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Title	Access	Created By	Modified	Size
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Software	Entire site	Graham Alexander Sack	Jul 9, 2014 1:37 am	2 items
Tutorials	Entire site	Graham Alexander Sack	Jul 9, 2014 1:38 am	1 item
Fundamentals-Tutorial.ipynb	Entire site	Graham Alexander Sack	Jul 9, 2014 7:11 am	19.5 KB
Syllabus - Computational Methods - REVISED V2.docx	Entire site	Graham Alexander Sack	Jul 9, 2014 1:43 am	129.5 KB

Show other sites

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Put here

notebooks

- Getting St...umentation
- Getting st...ox\_IPython
- Installation-Instructions
- ipython-notebook
- Notes fro...nd Andreas
- Re\_Gettin...ox\_IPython
- Vagrant-U...-Slides.pdf
- Docker
- README.markdown
- Vagrant
- bootstrap.sh
- guest\_config
- notebooks
- README.markdown
- Vagrantfile

# SHUTTING DOWN

- When you are done using notebook

1. Close the browser window

2. In Terminal, type

>> vagrant halt

```
graham-sacks-macbook-2:Vagrant graham_sack$ vagrant halt  
=> default: Attempting graceful shutdown of VM...  
graham-sacks-macbook-2:Vagrant graham_sack$ █
```

3. Close Terminal