

The Computer as Laboratory for Science

27 June 2016



Installing & Getting Started with Github

- Make an account at <https://github.com/> if you haven't already
- Add the FreeSurfer-Summer-Workshop Repository
- Navigate to ~/Documents/Github/FreeSurfer-Summer-Workshop



Open our jupyter notebook for today



Jupyter Notebook



Open an iTerm Session

- Type → `jupyter-notebook 'Notebook|2017.06.26.ipynb'`



Slack Channel

- Everyone have a user account?
- You should see the following channels: random, general, freesurfer
- Type help in slackbot channel for information on commands
- Communicate all questions & issues through slack, don't hesitate to ask questions if you're confused!

Unix Tutorial

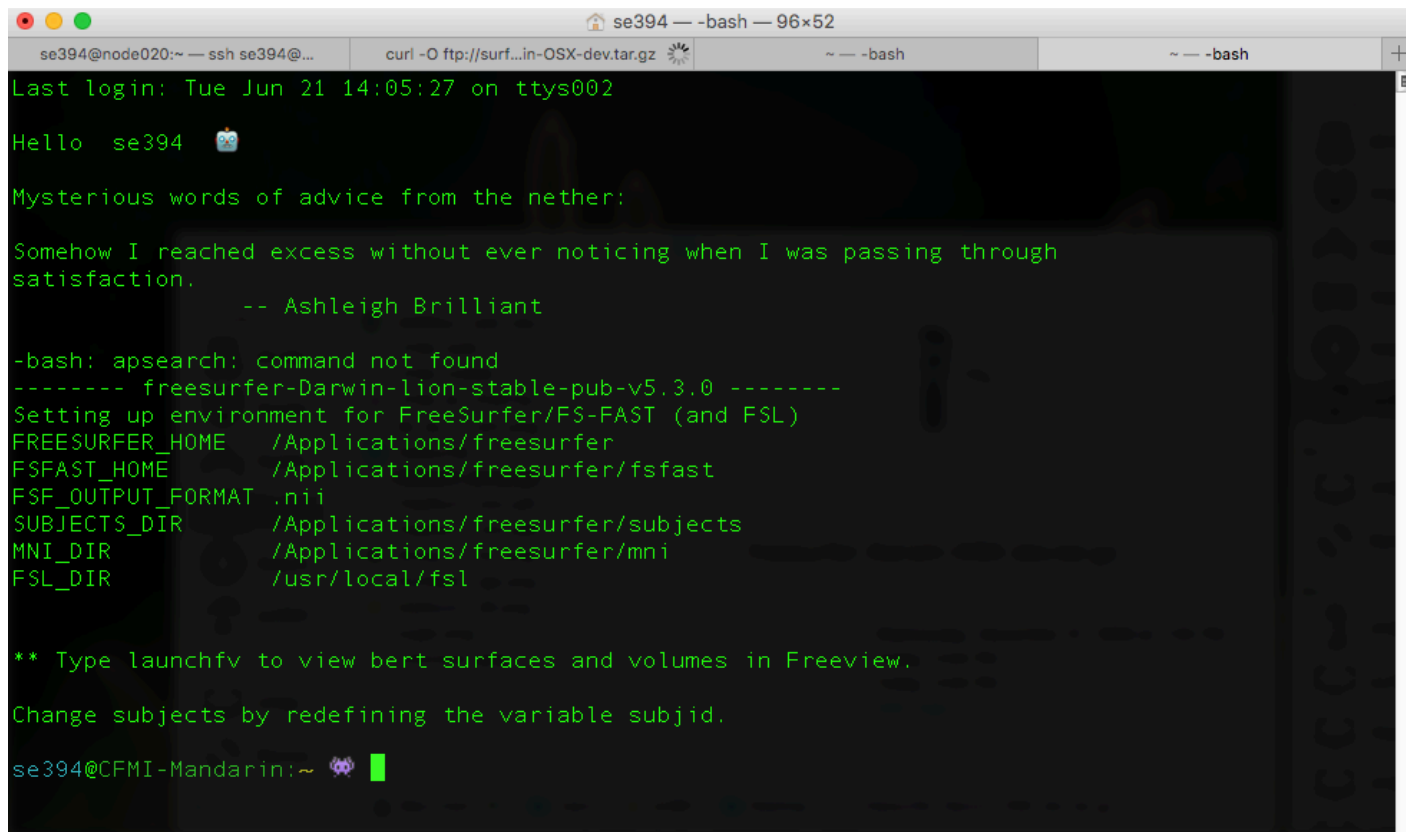
I-nix, U-nix, we-all-nix!

- 📌 UNIX is a fundamental tool for manipulating files, tuning your system, performing network tasks, installing new software, automating routine tasks, etc.
- 📌 You must learn UNIX if you are serious about neuroimaging.
- 📌 Getting started is easy - Just open a terminal!

I-nix, U-nix, we-all-nix!

Default
Environment
Settings &
Commands
set in .bash_profile

Command Prompt



```
se394@node020:~ -- ssh se394@...  curl -O ftp://surf...in-OSX-dev.tar.gz  ~ -- -bash  ~ -- -bash
Last login: Tue Jun 21 14:05:27 on ttys002

Hello  se394 🐼

Mysterious words of advice from the nether:

Somehow I reached excess without ever noticing when I was passing through
satisfaction.
        -- Ashleigh Brilliant

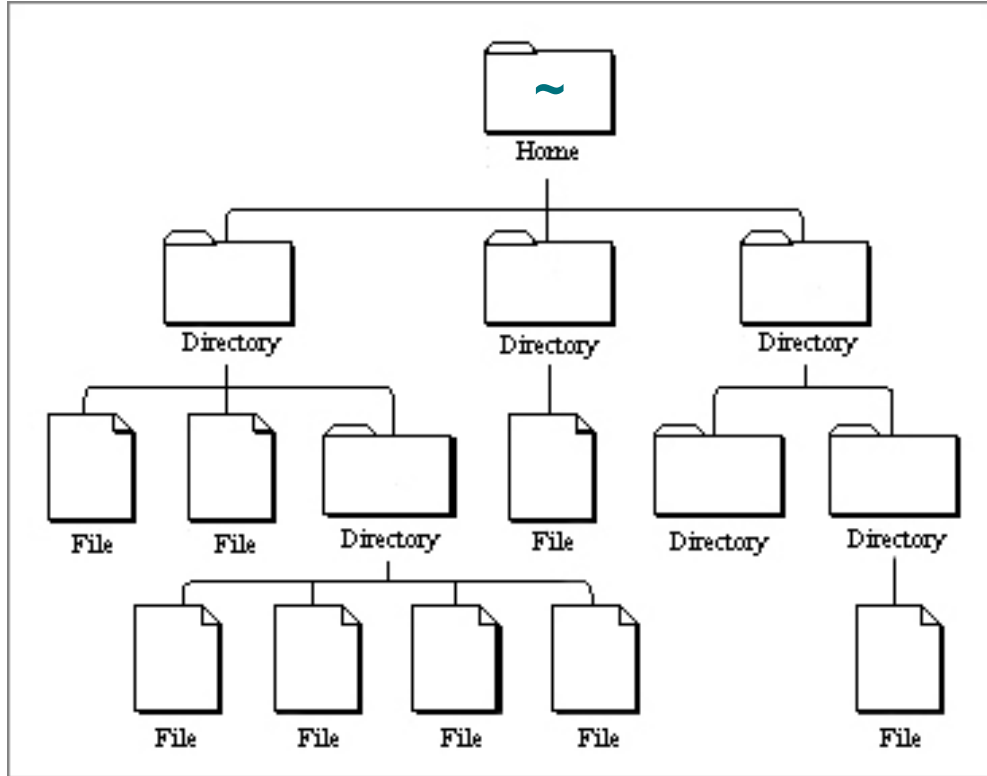
-bash: apsearch: command not found
----- freesurfer-Darwin-lion-stable-pub-v5.3.0 -----
Setting up environment for FreeSurfer/FS-FAST (and FSL)
FREESURFER_HOME   /Applications/freesurfer
FSFAST_HOME       /Applications/freesurfer/fsfast
FSF_OUTPUT_FORMAT .nii
SUBJECTS_DIR       /Applications/freesurfer/subjects
MNI_DIR           /Applications/freesurfer/mni
FSL_DIR           /usr/local/fsl

** Type launchfv to view bert surfaces and volumes in Freeview.

Change subjects by redefining the variable subjid.

se394@CFMI-Mandarin:~ 🐼 █
```

Unix :: A Hierarchical File System



Navigating File Systems

Basic

pwd	--	print working directory
cd	--	change directory
ls	--	list directory contents

Advanced Usage

pushd	--	save current directory
popd	--	return to saved directory

Anatomy of a Command

```
command -option1 -option2 file
```

```
command - -help
```

```
command -h
```

```
man __
```

Try:

```
ls --help
```

or

```
man ls
```

I-nix, U-nix, we-all-nix!

File Name Completion

 `ls ~/Dow` `# hit TAB key for autocomplete`

 `ls ~/Downloads` `# should autocomplete`

History

Use up arrow () to see previous commands

I-nix, U-nix, we-all-nix!

Source your `.bash_profile` for changes to take effect

```
🐙 source .bash_profile
```

You can make a back-up copy using the `cp` command:

```
🐙 cp .bash_profile .bash_profile.bak
```

Make a folder to store it in and move the back-up file there

```
🐙 mkdir backup-files
```

```
🐙 mv .bash_profile.bak backup-files/.bash_profile.bak
```

I-nix, U-nix, we-all-nix!

Rename your folder using the mv command

```
 mv backup-files mystery-folder
```

Delete the files in the folder

```
 rm backup-files/*
```

Delete the folder (note the use of the -r option)

```
 rm -r backup-files
```