

Deep Learning Part 1 Workshop: goo.gl/hW2H2c

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Windows setup

1. [Install steps](#)
2. Open PowerShell as Administrator (right-click powershell in start menu) and run:
`Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux`
3. Reboot if necessary
4. Open Settings -> Update and Security -> For developers, select *Developer Mode*
5. Open command prompt and type: *bash*, then follow instructions (or if you have Fall Creators Update, install 'Ubuntu' from the Windows Store)
6. For Windows 8.1 users, use [Cygwin](#)

Mac setup

- Homebrew: <https://brew.sh/>
- iTerm2: <http://www.iterm2.com/>

Initial AWS Setup

- Create AWS account

<https://aws.amazon.com/premiumsupport/knowledge-center/create-and-activate-aws-account/>

- Introduction to AWS
- Introduction to GPUs

Initial Paperspace Setup

- <https://www.paperspace.com/>
- Introduction to Paperspace
- When launching your first machine, enter code **FASTAI15** for \$15 credit (do not share this code)
- NB: To use the more powerful P5000 and P6000 GPUs the site will tell you to provide a reason for the request (this is to avoid fraud). Just type 'fast.ai' in this box and they will send you an email when it's approved. After you get the email, be sure to **refresh** paperspace.com in your browser

Initial Crestle Setup

- <https://www.crestle.com/>
- Introduction to Crestle

Using the terminal

- Why use a terminal?
- Accessing the terminal on your computer
- What is Bash?
- Your home directory

Anaconda on laptop

- Anaconda Introduction
- Python 3.6 introduction
- Anaconda installation: <https://www.anaconda.com/download/>

Linux

wget https://repo.continuum.io/archive/Anaconda3-5.0.0.1-Linux-x86_64.sh

MacOS

wget https://repo.continuum.io/archive/Anaconda3-5.0.0-MacOSX-x86_64.sh

- Then type 'bash' followed by the filename downloaded above
- When prompted, install to home directory, and update your PATH
- Close terminal and reopen

Pros and cons: Crestle, AWS, Paperspace, laptop, workstation

Introduction to Jupyter Notebook

Introduction to numeric programming in Python

- List comprehensions and more
- Numpy array basics
- Pandas basics

Learning to use bash and git

- Some handy bash tips
- Setting up and using an editor
- What is version control?
- What is git?
- What you need to know to use git in the course

SSH

- What is ssh
- Using ssh with paperspace and AWS
- Creating and using your public and private keys

Installing software

- pip
- sudo
- apt (for Ubuntu/Linux) or brew (for MacOS)

Machine learning foundations

- What is machine learning?
- What are test, validation, and training sets?