

Curso básico Linux/ trabajando con Python

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Python



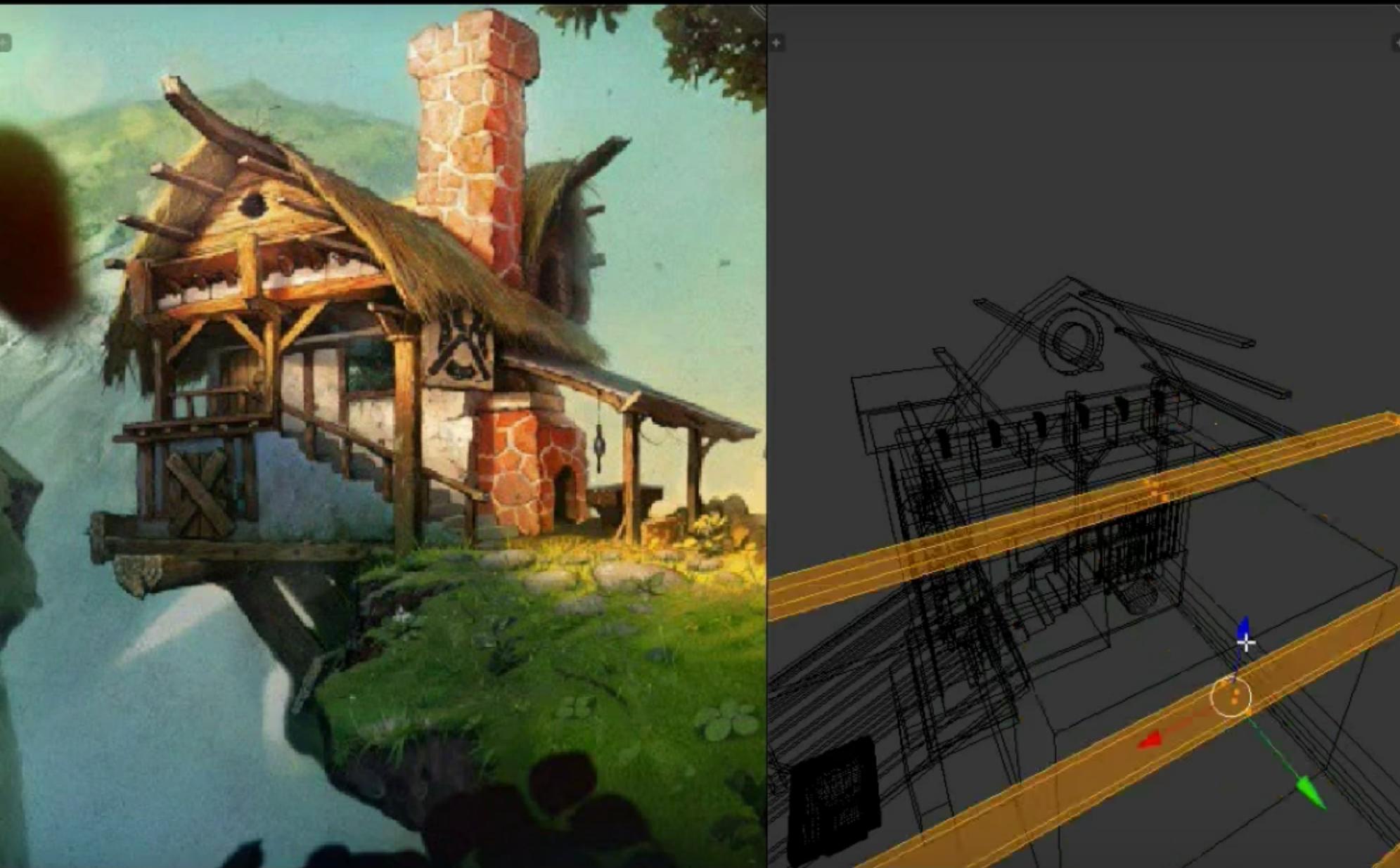
python

- Python es un lenguaje de programación que ya tiene su tiempo, sin embargo ha tenido un revival en los últimos tiempo debido básicamente a dos factores:
 - La capacidad de trabajar con simulaciones y gráficas
 - La posibilidad de visualizar datos
 - Machine learning (aprendizaje automático)

Blender

- <https://www.youtube.com/watch?v=NZIJOdU5ceU>

Blender 3D|Speed modeling|Model of the old house |



Ansys

- <https://www.youtube.com/watch?v=CTi1ru-pfi0>

ANSYS Workbench Tutorial - Simply Supported Beam - PART 1



A: Simply Supported Beam - Mechanical [ANSYS Multiphysics]

File Edit View Units Tools Help ✓ Solve ? Show Errors Worksheet

Show Vertices Wireframe Show Mesh Random Colors Annotation Preferences

Environment Inertial Loads Supports Conditions Direct FE

Joint Configure Configure Assemble

Outline

Filter: Name

Project

Model (A4)
Geometry
Coordinate Systems
Mesh
Static Structural (A5)
Analysis Settings
Fixed Support
Displacement
Solution (A6)
Solution Information

ANSYS
R15.0

A: Simply Supported Beam

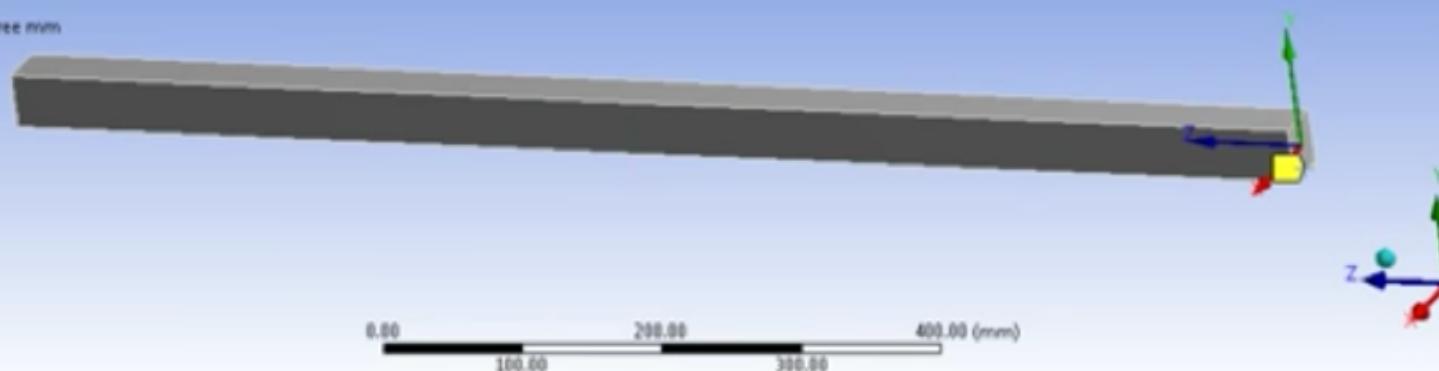
Displacement

Time: L.s

9/12/2015 8:35 PM

Displacement

Components: Free,Free,Free mm



0.00 100.00 200.00 300.00 400.00 (mm)

Details of "Displacement"

Scope

Scoping Method: Geometry Selection

Geometry: 1 Edge

Definition

Type: Displacement

Define By: Components

Coordinate System: Global Coordinate System

X Component: Free

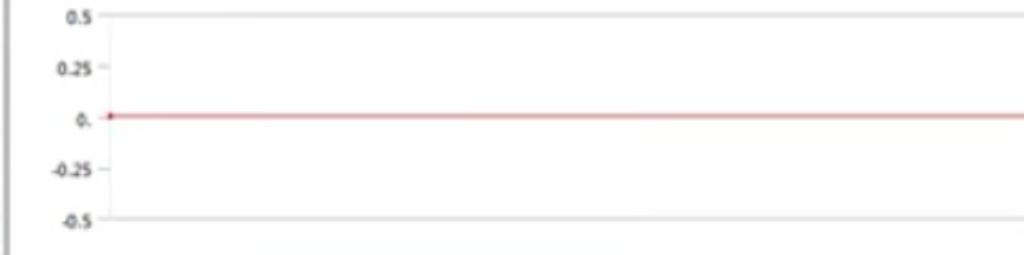
Y Component: 0. mm (ramped)

Z Component: 0.00

Suppressed: No

Geometry Print Preview Report Preview

Graph



Tabular Data

Steps	Time [s]	Y [mm]
1	0.	0.
2	1.	0.

Section Planes

3 X

DATQUEST

Learn Data Science
& Machine Learning in Python

Get Started Free

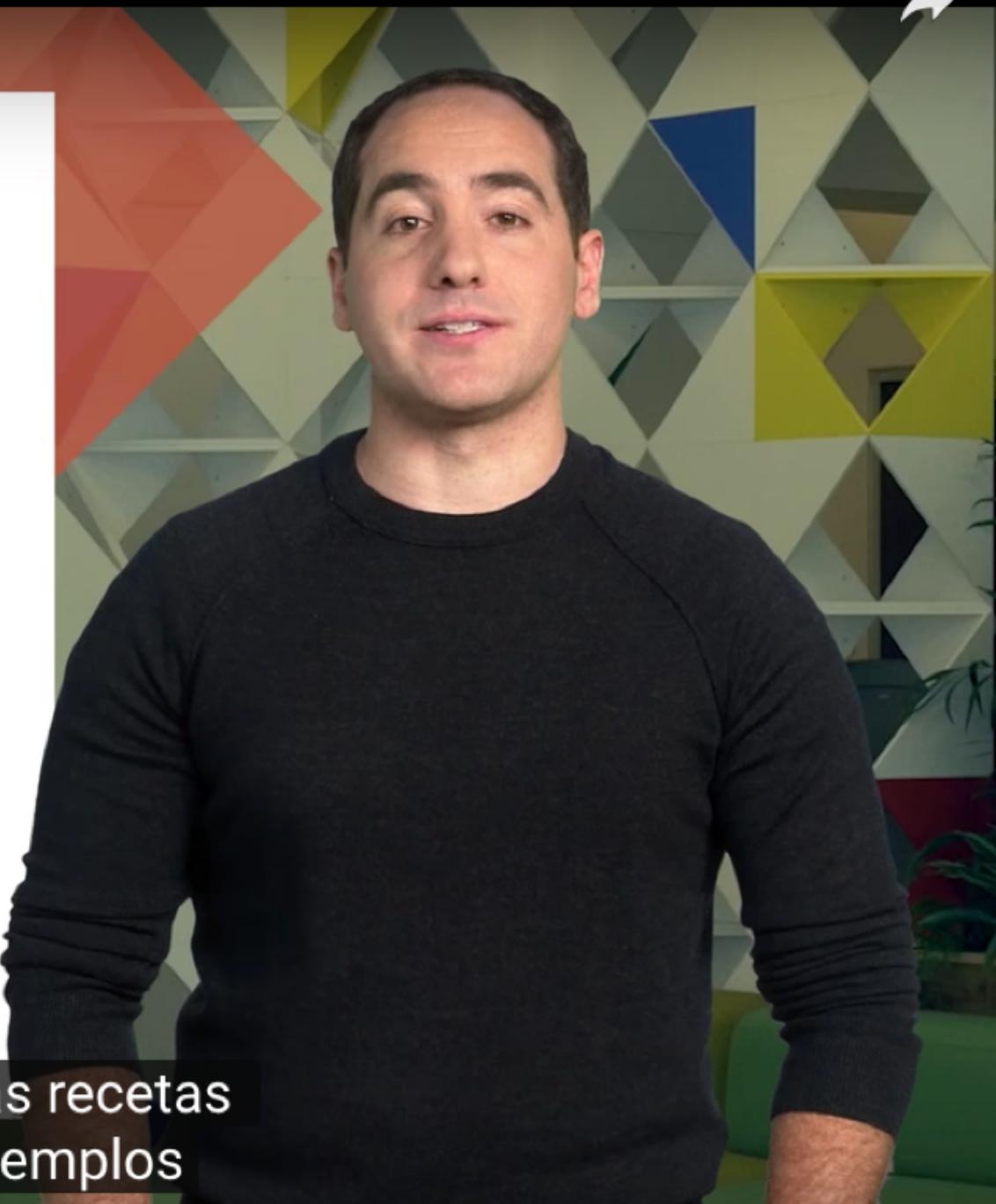
Metric (mm, kg, N, s, mV, mA) Degrees rad/s Kelvin

Machine Learning

<https://www.youtube.com/watch?v=cKxRvEZd3Mw>



Supervised Learning Recipe



Paso dos en nuestras recetas
para usar estos ejemplos

Python instalación

- Una de los factores a considerar al instalar Python es que muy complicado a la hora de instalar módulos, por ejemplo, no permite utilizar varias versiones de un módulo, por lo tanto siempre preferiremos ambientes virtuales, donde, de alguna manera, encapsulamos cada versión de Python, sin que los módulos entren en conflicto entre si.

Ambientes virtuales

- Pyenv/virtualwrapper
- Anaconda
- Miniconda

<https://gist.github.com/softwaredoug/a871647f53a0810c55ac>

Pyenv

```
sudo apt-get install git python-pip make build-essential libssl-dev zlib1g-dev libbz2-dev libreadline-dev libsqlite3-dev  
sudo pip install virtualenvwrapper  
git clone https://github.com/yyuu/pyenv.git ~/.pyenv  
git clone https://github.com/yyuu/pyenv-virtualenvwrapper.git ~/.pyenv/plugins/pyenv-virtualenvwrapper  
echo 'export PYENV_ROOT="$HOME/.pyenv"'>>~/.bashrc  
echo 'export PATH="$PYENV_ROOT/bin:$PATH"'>>~/.bashrc  
echo 'eval "$(pyenv init -)"' >>~/.bashrc  
echo 'pyenv virtualenvwrapper' >>~/.bashrc
```

Instalables

`pyenv install --list`

Escritorio de Ubuntu



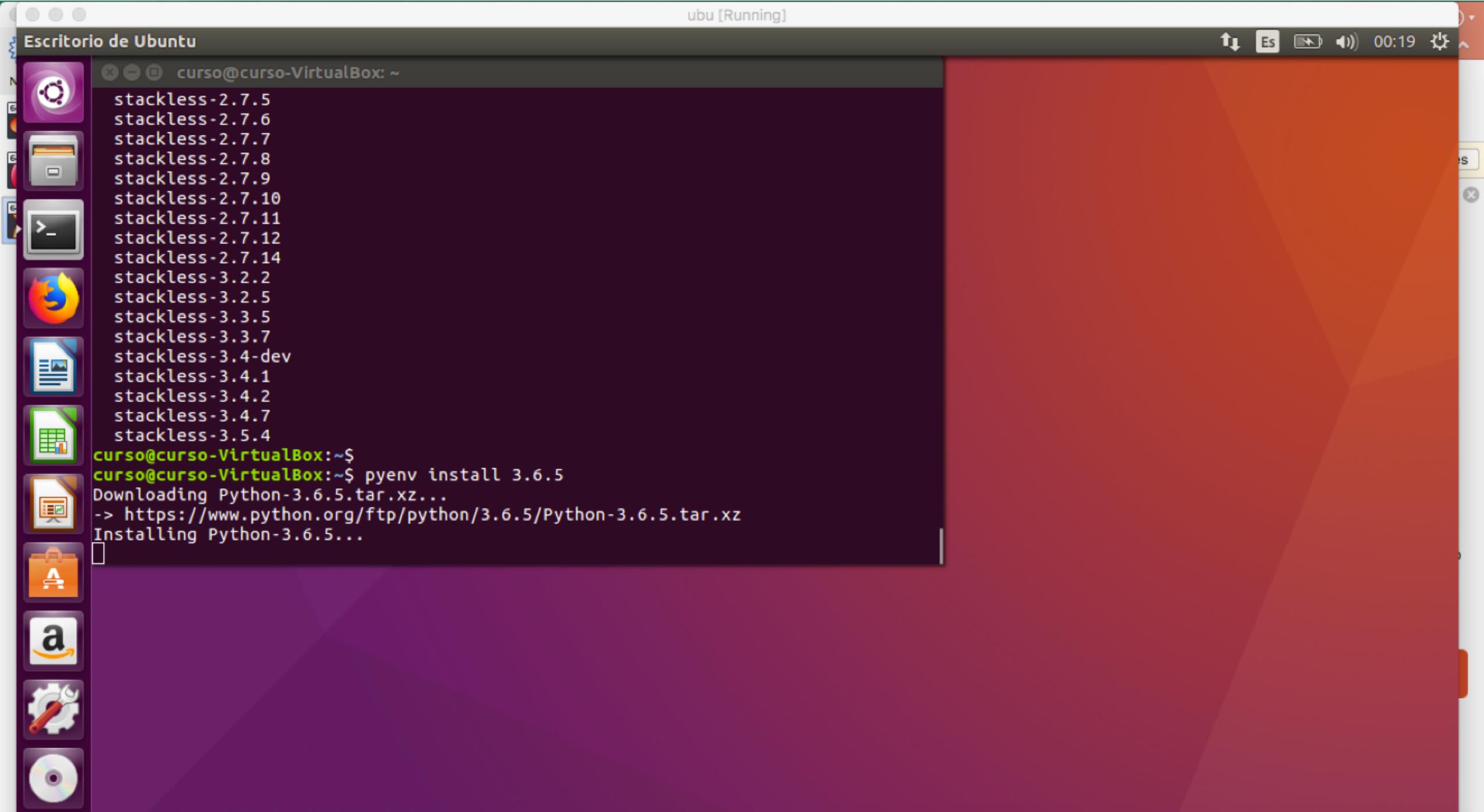
curso@curso-VirtualBox: ~

```
3.5.1  
3.5.2  
3.5.3  
3.5.4  
3.5.5  
3.5.5rc1  
3.6.0  
3.6-dev  
3.6.1  
3.6.2  
3.6.3  
3.6.4  
3.6.5  
3.7.0b4  
3.7-dev  
3.8-dev  
activepython-2.7.14  
activepython-3.5.4  
activepython-3.6.0  
anaconda-1.4.0  
anaconda-1.5.0  
anaconda-1.5.1  
anaconda-1.6.0  
anaconda-1.6.1
```

Instalación de Python

Este comando instala la versión 3.6.5 de Python, pero todavía no se ha creado un ambiente virtual

```
pyenv install 3.6.5
```



```
git clone https://github.com/yyuu/pyenv-virtualenv.git ~/.pyenv/plugins/pyenv-virtualenv  
*git clone https://github.com/pyenv/pyenv-virtualenv.git$(pyenv root)/plugins/pyenv-virtualenv
```

```
source ~/.bashrc
```

`pyenv versions`

pyenv virtualenv 3.6.5 ambiente365

- pyenv activate ambiente365

curso@curso-VirtualBox: ~

(ambiente36) curso@curso-VirtualBox:~\$



```
pip install --upgrade pip
```

