Installing Python: Linux

This lesson is a tutorial on how to install Python in a Linux environment.

We'll cover the following

Installation is a slightly different process for every operating system. This lesson is a guide for installing Python on Linux. You can move on to the next lesson if this isn't relevant to you.

Python in Linux

Many Linux distributions come with a pre-installed version of Python. Older distributions can have Python 2.7, whereas the newer ones may come equipped with the latest version. However, this is not a guarantee.

Below, we'll highlight the different approaches for ensuring that our Linux machine has the latest Python installed. For simplicity, we'll show the process for **Ubuntu**.

Checking the Version

The first step should always be to check if there is a version of Python and/or Python3 already installed. For this, simply have to go to the terminal and enter the following commands:

Python2

```
python --version
```

Python3

```
python3 --version
```

If our system does not have a distribution for Python3, we can move on with the installation.

1. Using the PPA Repository

This is a fast way of setting up Python on our machine. It also ensures automatic version updates in the future.

We'll be using the third-party repository called PPA. For this, we'll run the following commands to install all the required packages:

```
sudo apt update
sudo apt install software-properties-common
sudo add-apt-repository ppa:deadsnakes/ppa
```

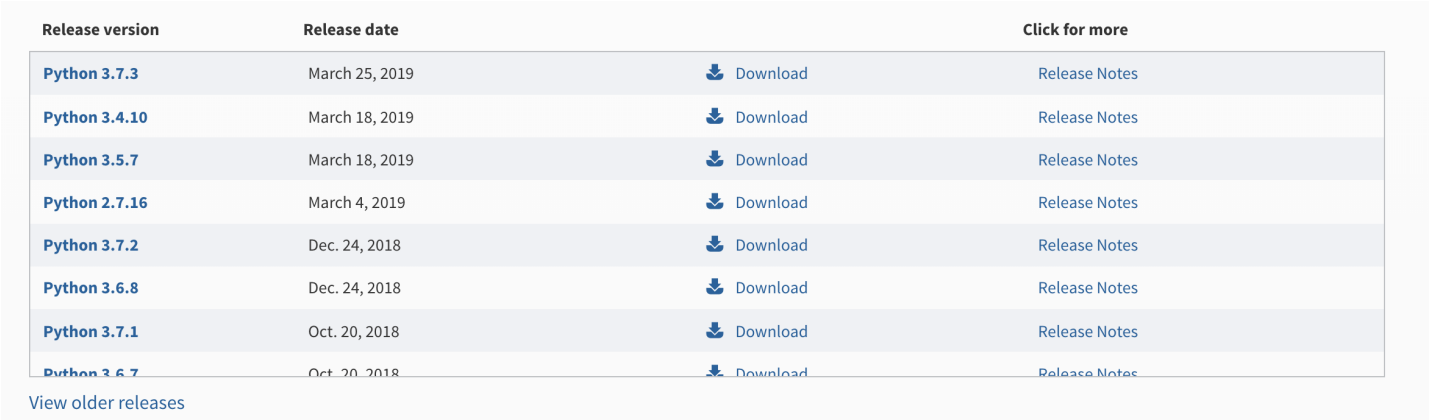
All that's left is to download the latest version of Python3 which is Python 3.7:

```
sudo apt update
sudo apt install python3.7
```

And we're good to go! We can confirm the version using `python3.7 --version`.

2. Using the Official Site (Advanced)

Visit the official Python download page and select the latest version:



Release version	Release date		Click for more
Python 3.7.3	March 25, 2019	Download	Release Notes
Python 3.4.10	March 18, 2019	Download	Release Notes
Python 3.5.7	March 18, 2019	Download	Release Notes
Python 2.7.16	March 4, 2019	Download	Release Notes
Python 3.7.2	Dec. 24, 2018	Download	Release Notes
Python 3.6.8	Dec. 24, 2018	Download	Release Notes
Python 3.7.1	Oct. 20, 2018	Download	Release Notes
Python 3.6.7	Oct. 20, 2018	Download	Release Notes

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We'll be directed to the respective page for that version, at the bottom of which there will be a **Files** section:

Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		2ee10f25e3d1b14215d56c3882486fcf	22973527	SIG
XZ compressed source tarball	Source release		93df27aec0cd18d6d42173e601ffbbfd	17108364	SIG
macOS 64-bit/32-bit installer	Mac OS X	for Mac OS X 10.6 and later	5a95572715e0d600de28d6232c656954	34479513	SIG
macOS 64-bit installer	Mac OS X	for OS X 10.9 and later	4ca0e30f48be690bfe80111daee9509a	27839889	SIG
Windows help file	Windows		7740b11d249bca16364f4a45b40c5676	8090273	SIG
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64	854ac011983b4c799379a3baa3a040ec	7018568	SIG
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64	a2b79563476e9aa47f11899a53349383	26190920	SIG
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64	047d19d2569c963b8253a9b2e52395ef	1362888	SIG
Windows x86 embeddable zip file	Windows		70df01e7b0c1b7042aabb5a3c1e2fbd5	6526486	SIG
Windows x86 executable installer	Windows		ebf1644cdc1eeeebacc92afa949cfc01	25424128	SIG
Windows x86 web-based installer	Windows		d3944e218a45d982f0abcd93b151273a	1324632	SIG

Select the **XZ compressed source tarball** and let the download complete.

In the meantime, we will install the packages required for Python using the following commands line by line:

```
sudo apt update

sudo apt install build-essential zlib1g-dev libncurses5-dev libgdbm-dev libnss3-dev libssl-dev lib
```

Now, copy the downloaded Python tarball into the `usr/src` directory and move there. If the tarball is in the **Downloads** folder, this should work:

```
sudo cp ~/Downloads/Python-3.7.3.tar.xz /usr/src
cd /usr/src
```

Let's unpack the tarball and move into its directory:

```
tar -xf Python-3.7.3.tar.xz
cd Python-3.7.3
```

Next, we have to set up the configuration for the installation. Finally, we just have to use the `make altinstall` command to install Python. Enter these commands:

```
./configure --enable-optimizations
sudo make altinstall
```

And there we have it! Python3 is ready for use on our Machine. We can check the version using `python3.7 --version`.

3. Using Anaconda (Simple)

Anaconda is a very popular open source data science platform which comes equipped with Python3 out of the box. Furthermore, many Python3 libraries and packages are already pre-installed.

This is definitely the best approach for beginners who are new to shell and terminal commands.

The setup is fairly simple. Visit the official download page and select the installer for Linux (both graphical and command-line installers are available).

After installation, we can simply type `python` in the terminal to run Python. This will show us the version which we're running and shift us to the Python environment. Don't worry about the rest for now. Exit the Python shell using `quit()`.

These are all the different ways we can install Python3 on our Linux machine. Hopefully, everything went smoothly. If you have any questions, do reach out to us!

In the next lesson, we'll learn how to set up Python for Windows.