



Agencia de
Aprendizaje
a lo largo
de la vida

BIG DATA

Ciencia de Datos

Programación en Python



Lenguaje de programación de alto nivel que
se caracteriza por su código de alta
legibilidad.



Características

- Es multiparadigma
- Es multiplataforma
- Es dinámicamente tipado
- Es fuertemente tipado
- Es interpretado

A yellow parallelogram containing the word "PIP" in white, bold, uppercase letters.

PIP

A yellow parallelogram containing the text ".py" in white, lowercase letters.

.py

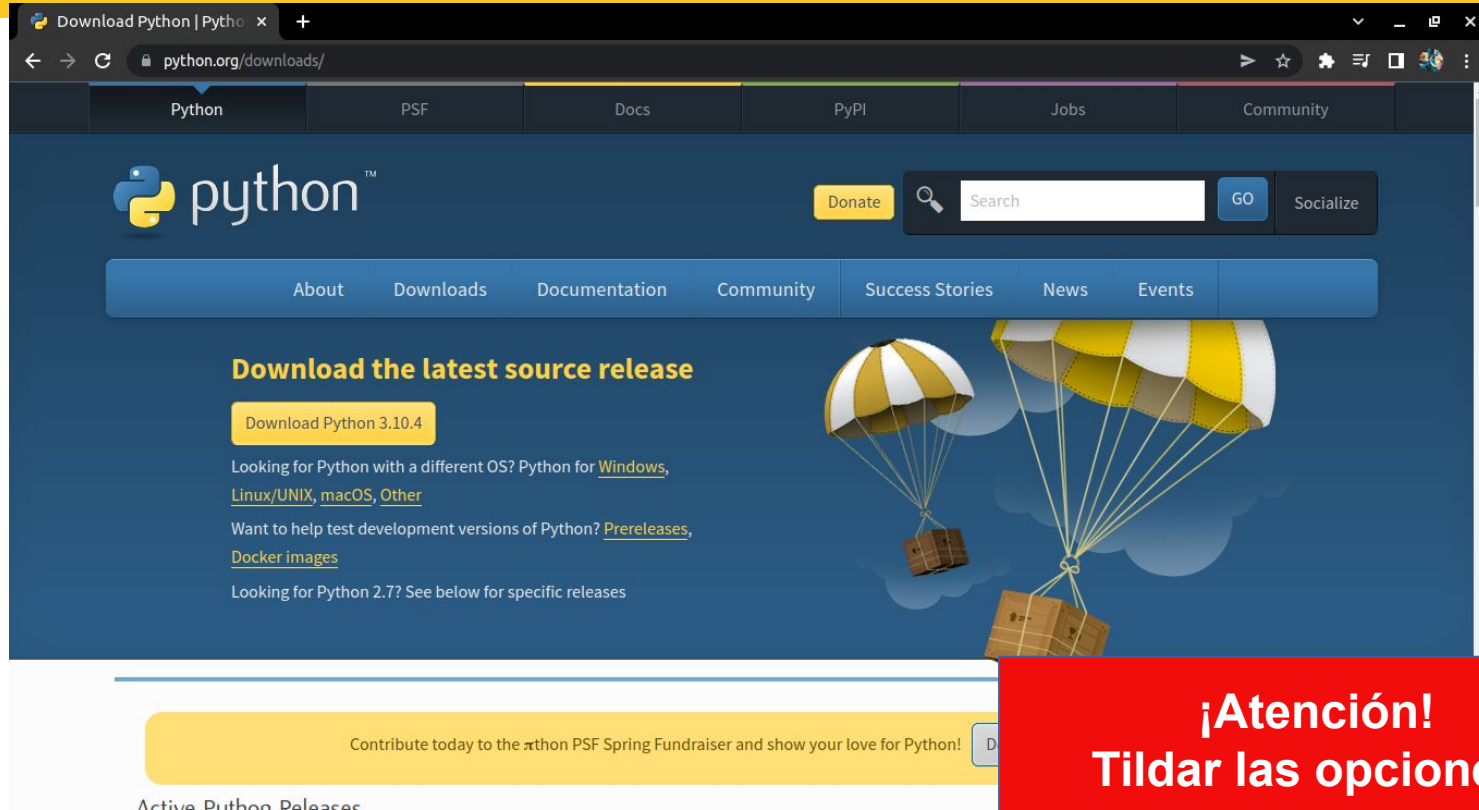


Guía PEP8: Buenas prácticas de programación



The screenshot shows the Python.org website with a dark blue header. The main navigation bar includes links for Python, PSF, Docs, PyPI, Jobs, and Community. Below this is a secondary navigation bar with links for About, Downloads, Documentation, Community, Success Stories, News, and Events. A search bar and a 'Donate' button are also present. The main content area displays the title 'PEP 8 -- Style Guide for Python Code' and a table of metadata.

PEP:	8
Title:	Style Guide for Python Code
Author:	Guido van Rossum <guido at python.org>, Barry Warsaw <barry at python.org>, Nick Coghlan <ncoghlan at gmail.com>
Status:	Active



The screenshot shows the Python.org website's download page. The browser's address bar displays 'python.org/downloads/'. The website has a dark blue header with the Python logo and a navigation menu including 'Python', 'PSF', 'Docs', 'PyPI', 'Jobs', and 'Community'. Below the header is a secondary navigation bar with links for 'About', 'Downloads', 'Documentation', 'Community', 'Success Stories', 'News', and 'Events'. The main content area features the heading 'Download the latest source release' and a prominent yellow button labeled 'Download Python 3.10.4'. Below this button, there are links for other operating systems ('Windows, Linux/UNIX, macOS, Other'), pre-releases, and Docker images. A large illustration of two parachutes carrying boxes is positioned to the right of the text. At the bottom of the page, a yellow banner promotes the 'Python PSF Spring Fundraiser'.

Download Python | Python x

python.org/downloads/

Python PSF Docs PyPI Jobs Community

python™

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About Downloads Documentation Community Success Stories News Events

Download the latest source release

Download Python 3.10.4

Looking for Python with a different OS? Python for [Windows](#), [Linux/UNIX](#), [macOS](#), [Other](#)

Want to help test development versions of Python? [Prereleases](#), [Docker images](#)

Looking for Python 2.7? See below for specific releases

Contribute today to the Python PSF Spring Fundraiser and show your love for Python!

Active Python Releases

¡Atención!
Tildar las opciones:
Agregar Python al PATH
Disable path length limit



Importante: Instalación

Prestar atención a las opciones: Seleccionar
Agregar Python al PATH – Disable path
length limit.

Entornos de trabajo



Visual Studio Code

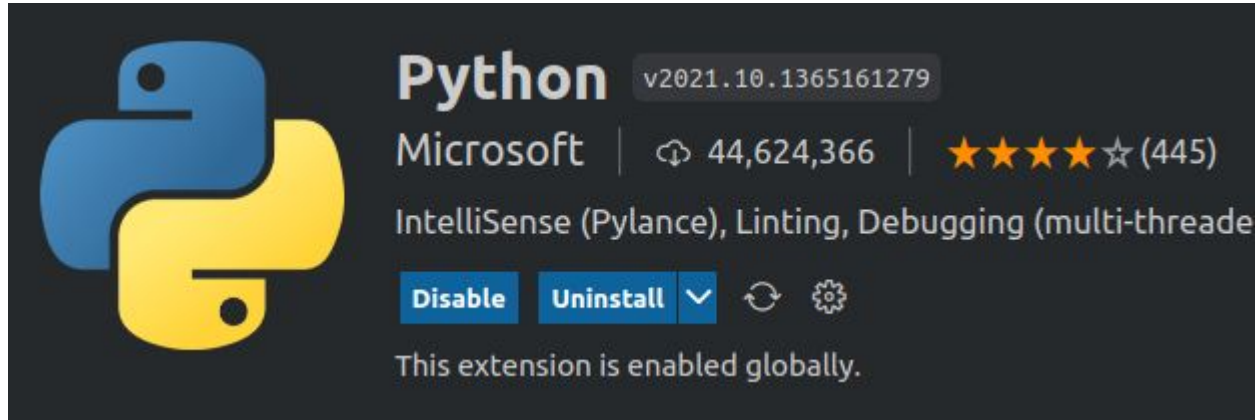


PyCharm



Visual Studio Code

Extensiones

A screenshot of the Python extension page in the Visual Studio Code extension marketplace. The card has a dark background. On the left is the Python logo (blue and yellow). To its right, the word 'Python' is in large white font, followed by the version 'v2021.10.1365161279' in a smaller font. Below this, 'Microsoft' is listed as the publisher, followed by a download icon and the number '44,624,366'. To the right of this is a star rating of four full stars and one half star, with '(445)' reviews. Below the rating, the description 'IntelliSense (Pylance), Linting, Debugging (multi-threaded)' is visible. At the bottom of the card, there are buttons for 'Disable' and 'Uninstall', a dropdown menu, a refresh icon, and a settings gear icon. Below these buttons, it says 'This extension is enabled globally.'

Python v2021.10.1365161279

Microsoft | 44,624,366 | ★★★★★ (445)

IntelliSense (Pylance), Linting, Debugging (multi-threaded)

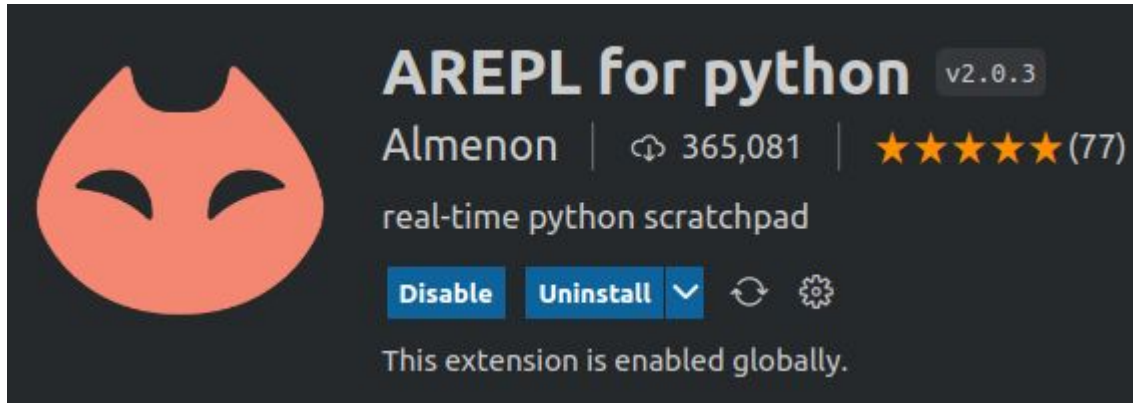
Disable Uninstall ▼ ↺ ⚙

This extension is enabled globally.



Visual Studio Code

Extensiones

A screenshot of the Visual Studio Code extension marketplace for the 'AREPL for python' extension. On the left is a red fox head icon. To the right, the text 'AREPL for python' is displayed in a large, bold font, with 'v2.0.3' in a smaller font to its right. Below this, the author 'Almenon' is listed, followed by a download icon and the number '365,081'. To the right of this is a five-star rating with '(77)' reviews. Below the rating, the description 'real-time python scratchpad' is shown. At the bottom of the card, there are three buttons: 'Disable', 'Uninstall', and a dropdown menu with a checkmark. To the right of these buttons are two icons: a refresh icon and a settings gear icon. Below the buttons, the text 'This extension is enabled globally.' is displayed.

AREPL for python v2.0.3

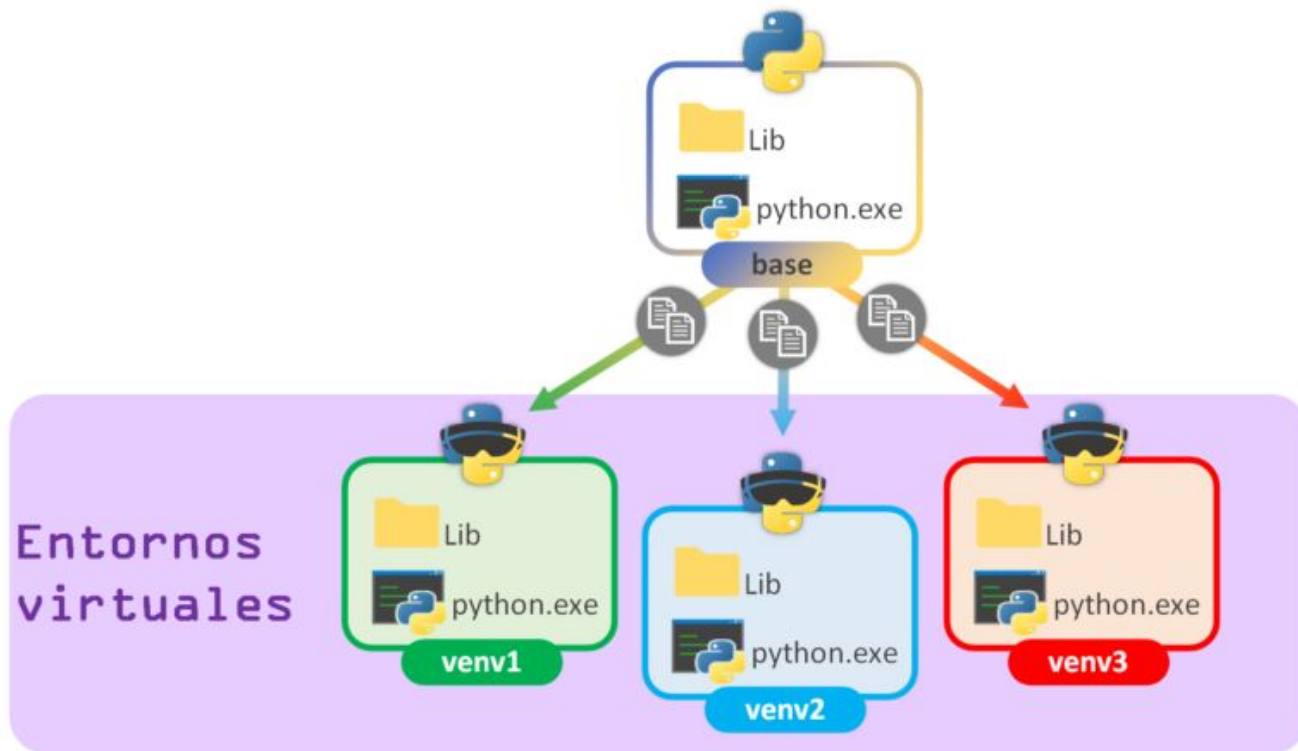
Almenon | 365,081 | ★★★★★ (77)

real-time python scratchpad

Disable Uninstall ▼ ↺ ⚙

This extension is enabled globally.

Entornos virtuales



Entornos virtuales : ventajas

- Aíslan la ejecución de proyectos
- Uso particular de entornos especialmente preparados
- Uso exclusivo de un entorno por proyecto
- Previene errores
- Garantiza el uso de la versión correcta
- Permite crear un listado de requisitos

virtualenv

```
pip install virtualenv
#instala el paquete venv

# Crear / activar entorno virtual Linux/Mac
virtualenv venv
source venv/bin/activate

#windows: ver próximo slide

deactivate #desactiva el entorno virtual win/Linux/Mac

pip freeze > requirements.txt
# copia los requerimientos del proyecto a un txt
# Linux/Mac

pip install -r requirements.txt
# instala los paquetes que requiere el proyecto
# Win/Linux/Mac
```

virtualenv

```
# Crear/Activar entorno virtual en Windows
# en la carpeta de Python[vxx]/Scripts:
python -m venv mi_entorno
cd mi_entorno
Scripts\activate

py -m pip freeze > requirements.txt
#copia los requerimientos de nuestro proyecto a un txt
```

```
C:\Users\Regina\AppData\Local\Programs\Python\Python37-32\Scripts>python -m venv venv
C:\Users\Regina\AppData\Local\Programs\Python\Python37-32\Scripts>cd venv
C:\Users\Regina\AppData\Local\Programs\Python\Python37-32\Scripts\venv>Scripts\activate
(venv) C:\Users\Regina\AppData\Local\Programs\Python\Python37-32\Scripts\venv>deactivate
C:\Users\Regina\AppData\Local\Programs\Python\Python37-32\Scripts\venv>
```

Entornos de trabajo : Notebooks



Google Colaboratory



Deepnote



Primeros pasos

```
C:\> Administrador: Símbolo del sistema - python

Microsoft Windows [Versión 10.0.19044.2006]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Windows\system32>python --version
Python 3.10.4

C:\Windows\system32>python
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> print("Hola mundo!")
Hola mundo!
>>> quit()
```

Recursos

Notas:

- Python: <https://www.python.org/downloads/>
- Entornos virtuales: <https://docs.python.org/es/3.8/library/venv.html#>
- Project Jupyter: <https://jupyter.org/install.html>
- Google Colab: <https://colab.research.google.com/>
- Deepnote: <https://deepnote.com/>
- Guía PEP 8: <https://www.python.org/dev/peps/pep-0008/>