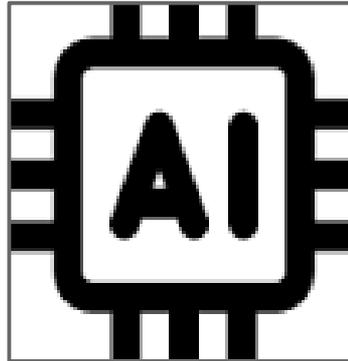


Introducción a la Inteligencia Artificial



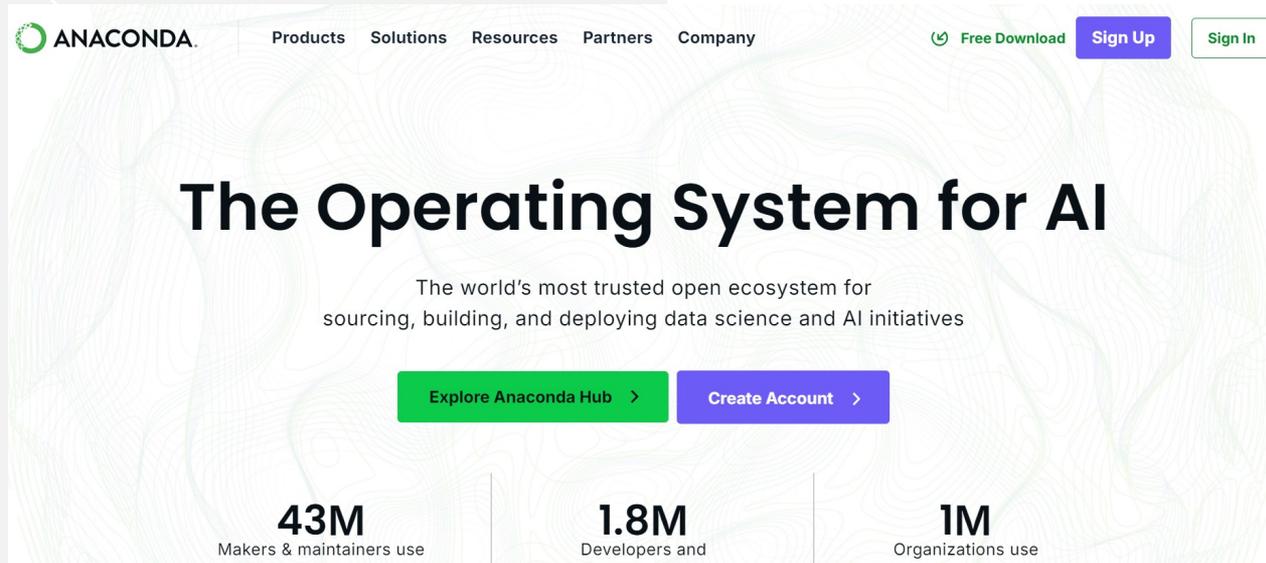
Configuración del Entorno de Trabajo para IA

Objetivo

El objetivo de este módulo es proporcionar a los estudiantes las habilidades necesarias para configurar un entorno de desarrollo eficiente para proyectos de Inteligencia Artificial, utilizando Anaconda, Visual Studio Code y Jupyter Notebooks. Al finalizar, los alumnos serán capaces de instalar y utilizar estas herramientas, creando un flujo de trabajo óptimo para el desarrollo y experimentación en IA.

¿Qué es Anaconda?

Distribución de Python para Ciencia de Datos y Machine Learning.



The screenshot shows the Anaconda website homepage. At the top left is the Anaconda logo and the word "ANACONDA". To the right are navigation links: "Products", "Solutions", "Resources", "Partners", and "Company". Further right are buttons for "Free Download", "Sign Up", and "Sign In". The main heading is "The Operating System for AI". Below it is a sub-heading: "The world's most trusted open ecosystem for sourcing, building, and deploying data science and AI initiatives". There are two buttons: "Explore Anaconda Hub" and "Create Account". At the bottom, there are three statistics: "43M Makers & maintainers use", "1.8M Developers and", and "1M Organizations use".

ANACONDA. Products Solutions Resources Partners Company Free Download Sign Up Sign In

The Operating System for AI

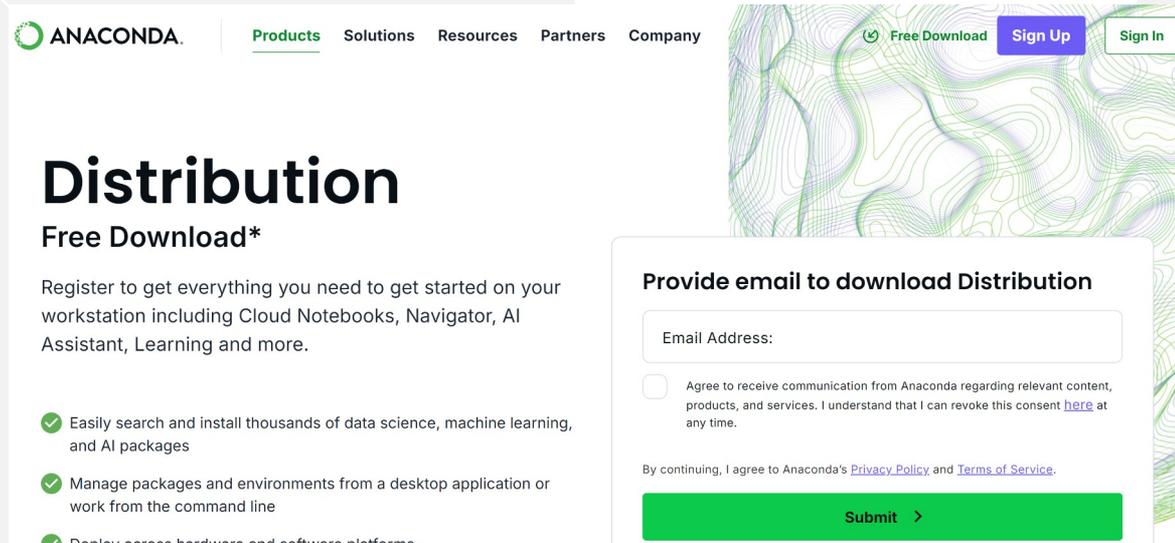
The world's most trusted open ecosystem for sourcing, building, and deploying data science and AI initiatives

Explore Anaconda Hub > Create Account >

43M Makers & maintainers use | 1.8M Developers and | 1M Organizations use

Descarga de Anaconda

Visita anaconda.com/download y selecciona tu sistema operativo. Sigue las instrucciones por defecto.



ANACONDA. [Products](#) [Solutions](#) [Resources](#) [Partners](#) [Company](#)

Distribution
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Register to get everything you need to get started on your workstation including Cloud Notebooks, Navigator, AI Assistant, Learning and more.

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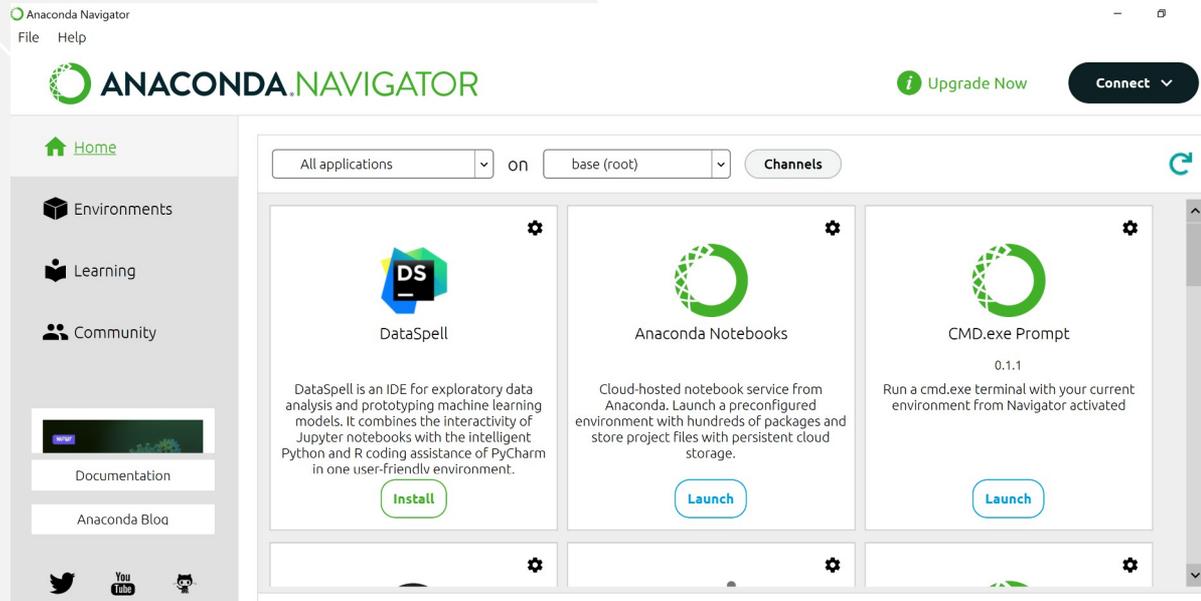
Agree to receive communication from Anaconda regarding relevant content, products, and services. I understand that I can revoke this consent [here](#) at any time.

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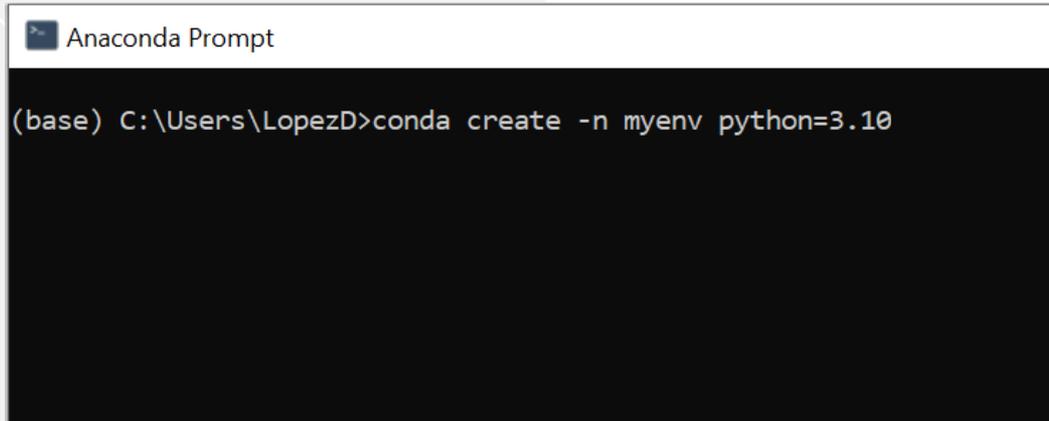
Anaconda Navigator

Interfaz gráfica para gestionar entornos y aplicaciones.



Creación de un Entorno Virtual

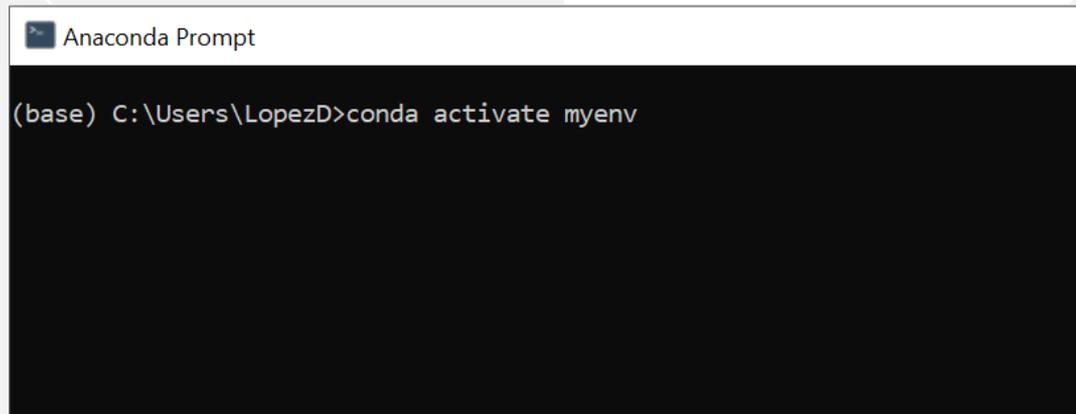
Creá un entorno aislado con "conda create -n myenv python=3.10"



```
Anaconda Prompt  
(base) C:\Users\LopezD>conda create -n myenv python=3.10
```

Activación del Entorno

Activá tu entorno con "conda activate myenv"



```
Anaconda Prompt
(base) C:\Users\LopezD>conda activate myenv
```

¿Qué es VS Code?

Editor de código versátil con soporte para Python e IA.

The image shows a screenshot of the Visual Studio Code website and a code editor interface. The website header includes navigation links: Visual Studio Code, Docs, Updates, Blog, API, Extensions, FAQ, Learn, and a Search Docs field. A blue 'Download' button is visible. Below the header, a message states 'Version 1.92 is now available! Read about the new features and fixes from July.' A callout box says 'Free. Built on open source. Runs everywhere.' The main text reads 'Code Editing. Redefined.' with a 'Download for Windows' button. The code editor interface shows a file explorer on the left with a project structure including 'MY-APP', 'components', 'actionbar', 'breadcrumbs', 'button', 'button.css', 'button.ts', 'countBadge', 'dialog', 'dropdown', 'findinput', 'grid', 'hover', 'inputBox', '.gitignore', and '.mailmap'. The main editor area displays TypeScript code for a button component, with an AI suggestion box above it that says 'Create a new button component' and buttons for 'Accept' and 'Discard'.

Visual Studio Code Docs Updates Blog API Extensions FAQ Learn [Download](#)

[Version 1.92](#) is now available! Read about the new features and fixes from July.

Free. Built on open source. Runs everywhere.

Code Editing. Redefined.

[Download for Windows](#)

Instalación de VS Code

Descargá e instalá desde code.visualstudio.com.

The screenshot shows the Visual Studio Code website's download page. At the top, there is a navigation bar with links for 'Visual Studio Code', 'Docs', 'Updates', 'Blog', 'API', 'Extensions', 'FAQ', and 'Learn'. A search bar for 'Search Docs' and a 'Download' button are also present. The main heading is 'Download Visual Studio Code', followed by the tagline 'Free and built on open source. Integrated Git, debugging and extensions.' Below this, three platform icons are shown: Windows (blue window icon), Linux (Tux penguin icon), and Mac (black apple icon). Under the Windows icon is a blue button labeled 'Windows' with 'Windows 10, 11' below it. Under the Linux icon are two blue buttons: '.deb' for 'Debian, Ubuntu' and '.rpm' for 'Red Hat, Fedora, SUSE'. Under the Mac icon is a blue button labeled 'Mac' with 'macOS 10.15+' below it. Below each platform section, there are lists of available download formats and architectures. For Windows, formats include User Installer, System Installer, .zip, and CLI, with x64 and Arm64 architectures. For Linux, formats include .deb, .rpm, .tar.gz, Snap, and CLI, with x64, Arm32, and Arm64 architectures. For Mac, formats include .zip and CLI, with Intel chip, Apple silicon, and Universal architectures.

Platform	Format	Architecture	
Windows	User Installer	x64, Arm64	
	System Installer	x64, Arm64	
	.zip	x64, Arm64	
	CLI	x64, Arm64	
Linux	.deb	x64, Arm32, Arm64	
		.rpm	x64, Arm32, Arm64
		.tar.gz	x64, Arm32, Arm64
	Snap	Snap Store	
	CLI	x64, Arm32, Arm64	
	Mac	.zip	Intel chip, Apple silicon, Universal
CLI		Intel chip, Apple silicon	

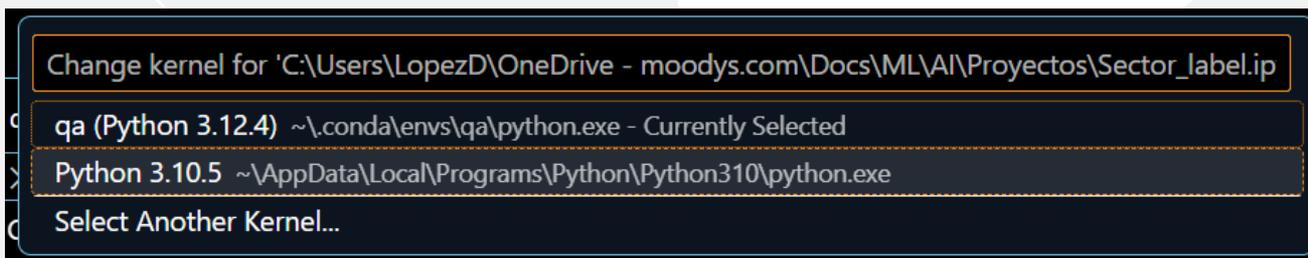
Configuración de VS Code para Python

Instalá la extensión de Python.



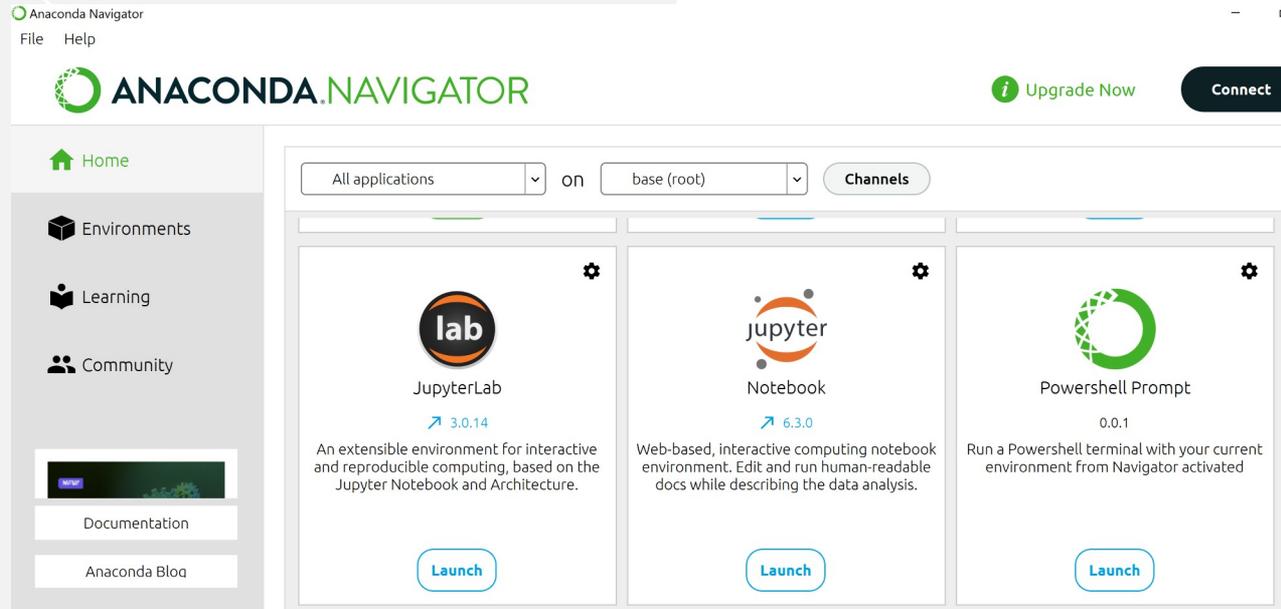
Integración de Anaconda con VS Code

Seleccioná tu entorno de Anaconda en VS Code.



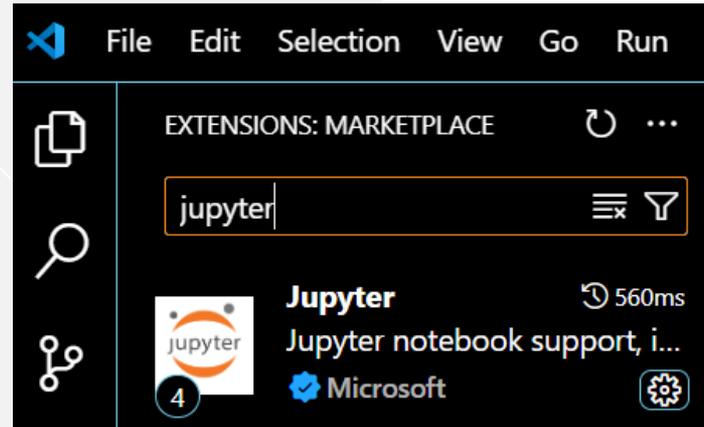
Jupyter en Anaconda Navigator

Iniciá Jupyter Notebook desde Anaconda Navigator.



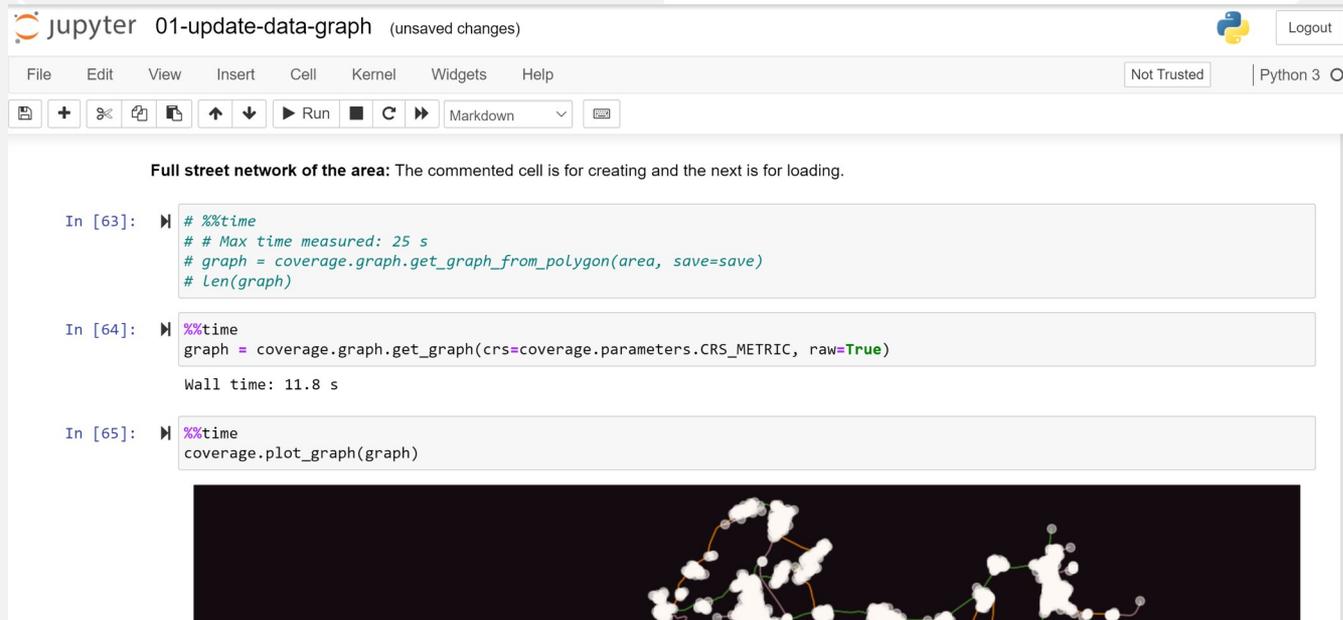
Jupyter en VS Code

Usa la extensión de Jupyter para crear notebooks..



Estructura de un Jupyter Notebook

Alterná entre celdas de código y markdown.



The screenshot shows a Jupyter Notebook window titled "jupyter 01-update-data-graph (unsaved changes)". The interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help), a toolbar with icons for file operations and execution, and a status bar indicating "Not Trusted" and "Python 3".

The notebook content consists of three code cells and a visualization:

- Cell 63:** A code cell with the following content:

```
In [63]: ▶ # %%time
          # # Max time measured: 25 s
          # graph = coverage.graph.get_graph_from_polygon(area, save=save)
          # Len(graph)
```
- Cell 64:** A code cell with the following content:

```
In [64]: ▶ %%time
          graph = coverage.graph.get_graph(crs=coverage.parameters.CRS_METRIC, raw=True)

          Wall time: 11.8 s
```
- Cell 65:** A code cell with the following content:

```
In [65]: ▶ %%time
          coverage.plot_graph(graph)
```

Below the code cells, a visualization of a graph is shown. The graph consists of white nodes connected by orange and green edges, set against a black background.

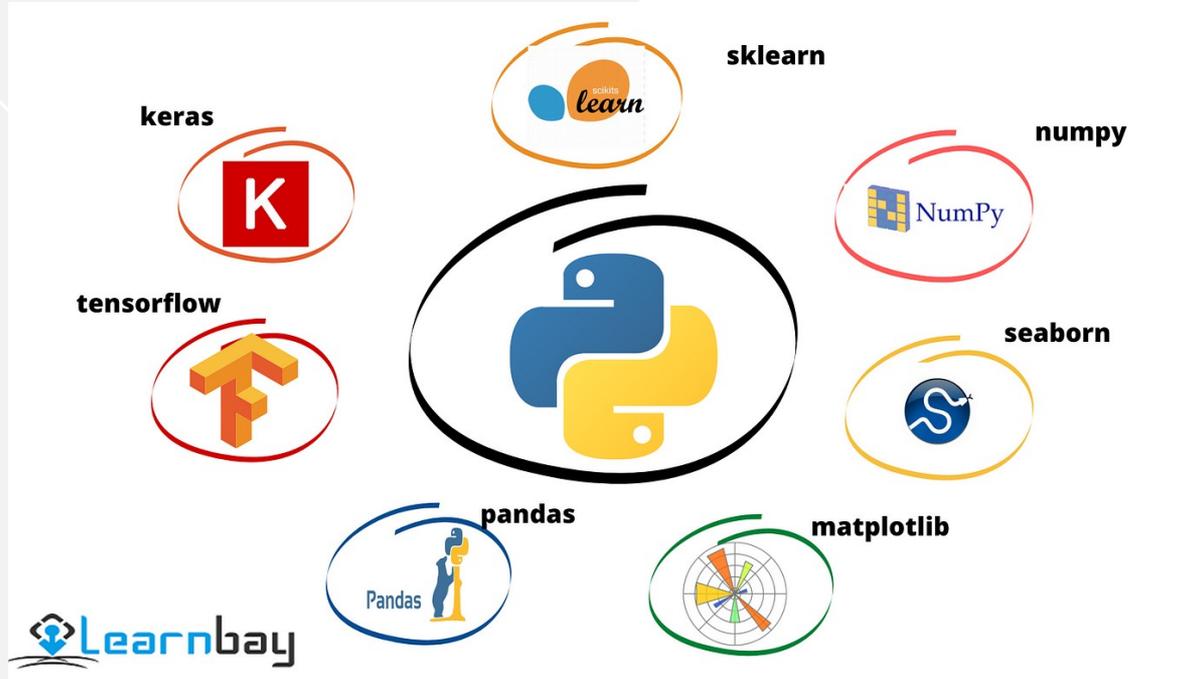
Instalación de Paquetes

Usa "conda install" o "pip install" para agregar librerías.

```
Anaconda Prompt
(base) C:\Users\LopezD>conda install pandas
```

```
Anaconda Prompt
(base) C:\Users\LopezD>pip install pandas
```

Paquetes Esenciales para IA



Buenas Prácticas

- *Mantené entornos separados para diferentes proyectos.*
- *Actualizá regularmente tus herramientas y paquetes.*
- *Documentá tu código exhaustivamente.*
- *Realizá copias de seguridad frecuentes de tus proyectos.*
- *Eliminá salidas innecesarias de tus notebooks.*

Fin

¿Preguntas?