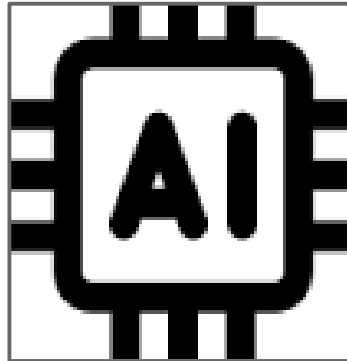


# Introducción a la Inteligencia Artificial



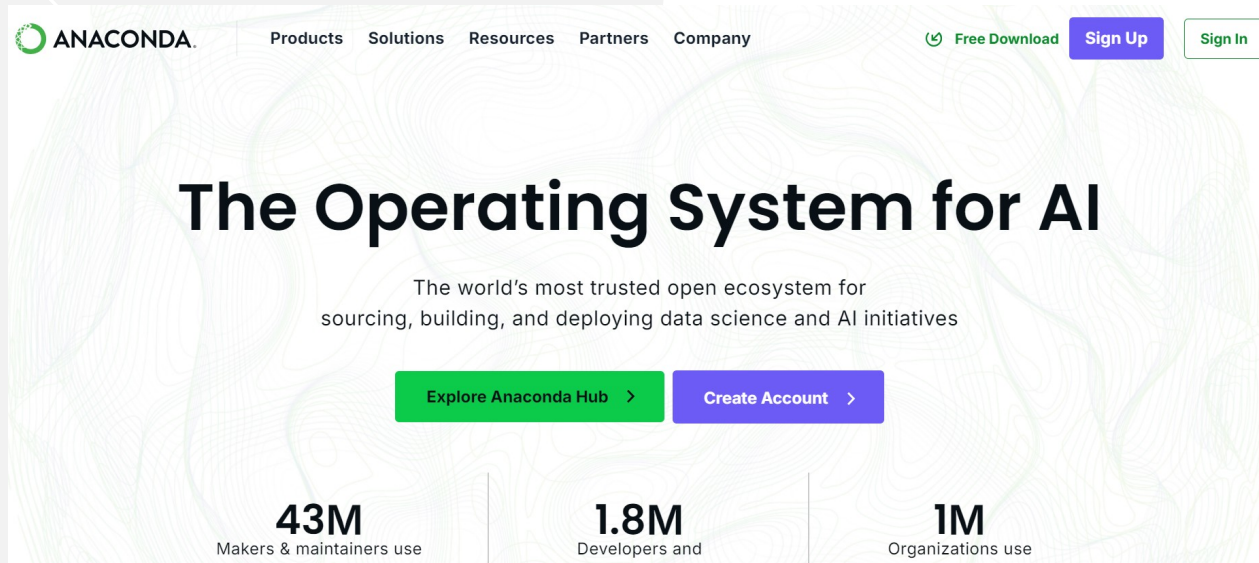
Configuración del Entorno de Trabajo para IA

# 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. The navigation menu includes 'Products', 'Solutions', 'Resources', 'Partners', and 'Company'. On the right, there are buttons for 'Free Download', 'Sign Up', and 'Sign In'. The main heading is 'The Operating System for AI'. Below it is the tagline: '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'.

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## 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](https://anaconda.com/download) y selecciona tu sistema operativo. Sigue las instrucciones por defecto.*

ANACONDA. [Products](#) [Solutions](#) [Resources](#) [Partners](#) [Company](#) [Free Download](#) [Sign Up](#) [Sign In](#)

## Distribution

### Free Download\*

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

- ✓ Easily search and install thousands of data science, machine learning, and AI packages
- ✓ Manage packages and environments from a desktop application or work from the command line
- ✓ Deploy across hardware and software platforms

### Provide email to download Distribution

Email Address:

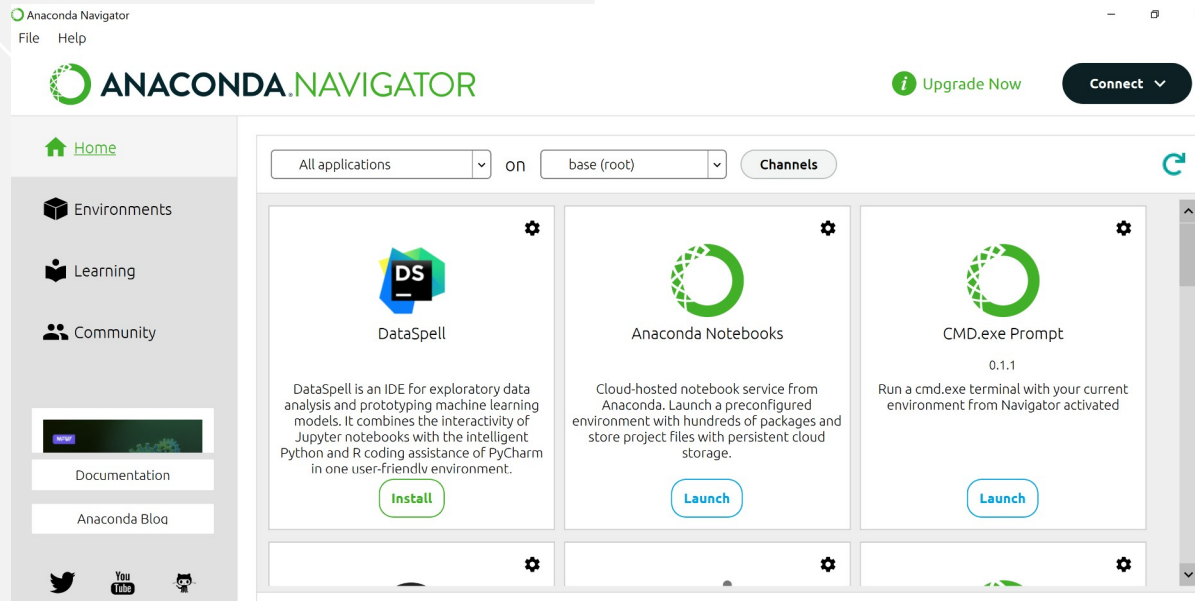
Agree to receive communication from Anaconda regarding relevant content, products, and services. I understand that I can revoke this consent [here](#) at any time.

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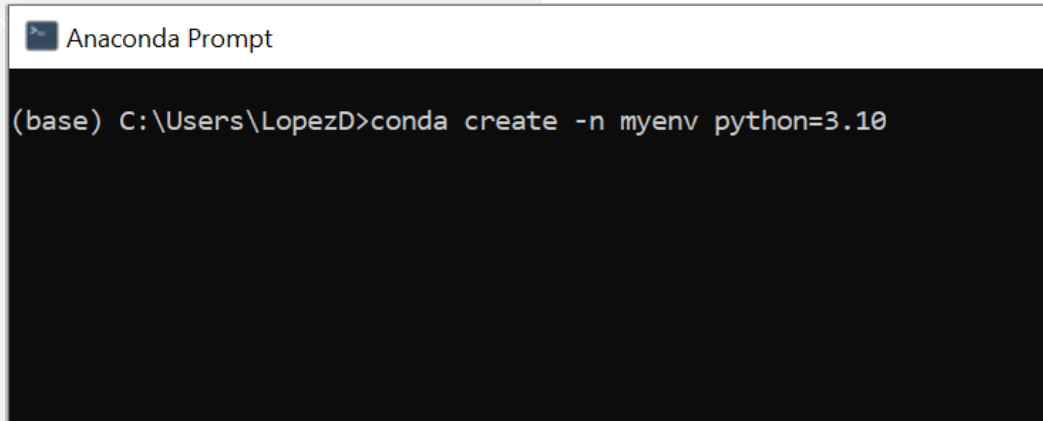
## Anaconda Navigator

*Interfaz gráfica para gestionar entornos y aplicaciones.*



# Creación de un Entorno Virtual

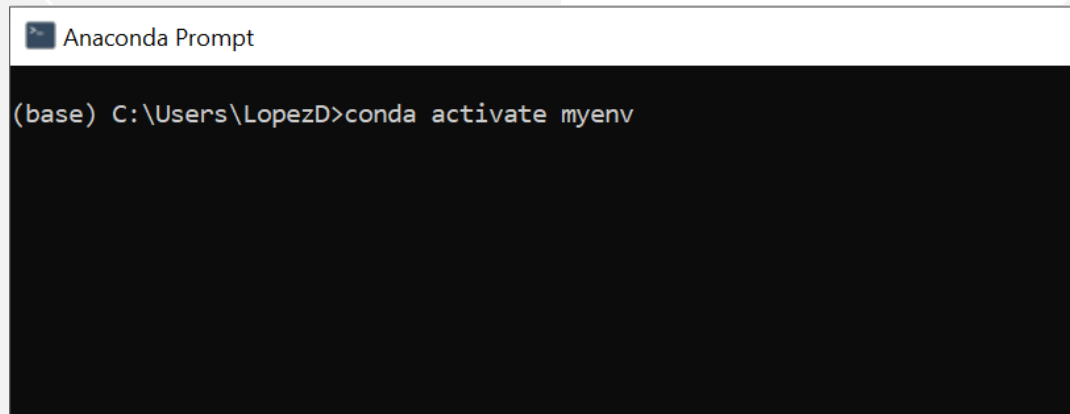
*Creá un entorno aislado con "conda create -n myenv python=3.10"*



```
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 assistant suggestion to 'Create a new button component' and 'Accept' and 'Discard' buttons. The bottom status bar shows 'zsh' and 'Starting monaco.d.ts generation'.

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](#)

EXPLORER

- MY-APP
  - components
    - actionbar
    - breadcrumbs
    - button
  - # button.css
  - TS button.ts
  - countBadge
  - dialog
  - dropdown
  - findinput
  - grid
  - hover
  - inputBox
  - .gitignore
  - .mailmap

TS button.ts x # button.css

```
1 interface ButtonProps {
2   onClick: () => void;
3   text: string;
4 }
5
6 const Button: React.FC<Props> = ({ onClick, text }) => {
7   return <button onClick={onClick}>{text}</button>;
8 };
9
10 export default Button;
```

Create a new button component

Accept Discard Changed 9 lines

PROBLEMS OUTPUT TERMINAL zsh

[09:44:50] [monaco.d.ts] Starting monaco.d.ts generation



## Instalación de VS Code

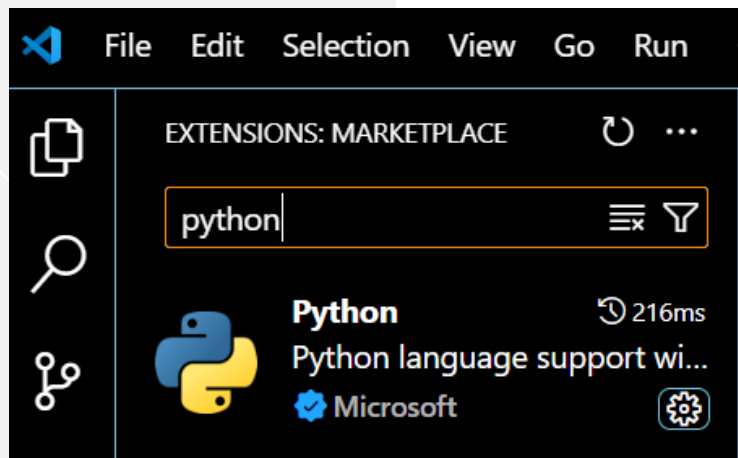
*Descargá e instalá desde [code.visualstudio.com](https://code.visualstudio.com).*

The screenshot shows the Visual Studio Code 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, there are three main sections for operating systems: Windows, Linux, and Mac. Each section has a download button and a list of available installers and their supported architectures.

Operating System	Download Button	Available Installers
Windows	Windows 10, 11	User Installer (x64, Arm64), System Installer (x64, Arm64), .zip (x64, Arm64), CLI (x64, Arm64)
Linux	.deb (Debian, Ubuntu), .rpm (Red Hat, Fedora, SUSE)	.deb (x64, Arm32, Arm64), .rpm (x64, Arm32, Arm64), .tar.gz (x64, Arm32, Arm64), Snap (Snap Store), CLI (x64, Arm32, Arm64)
Mac	Mac (macOS 10.15+)	.zip (Intel chip, Apple silicon, Universal), CLI (Intel chip, Apple silicon)

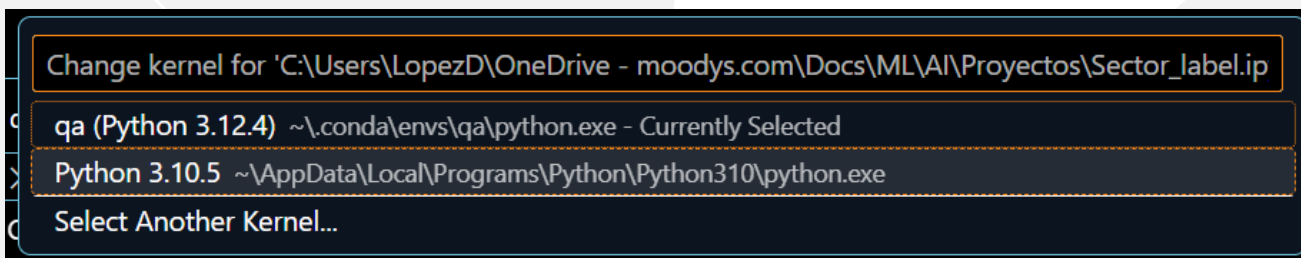
# Configuración de VS Code para Python

*Instalá la extensión de Python.*



# Integración de Anaconda con VS Code

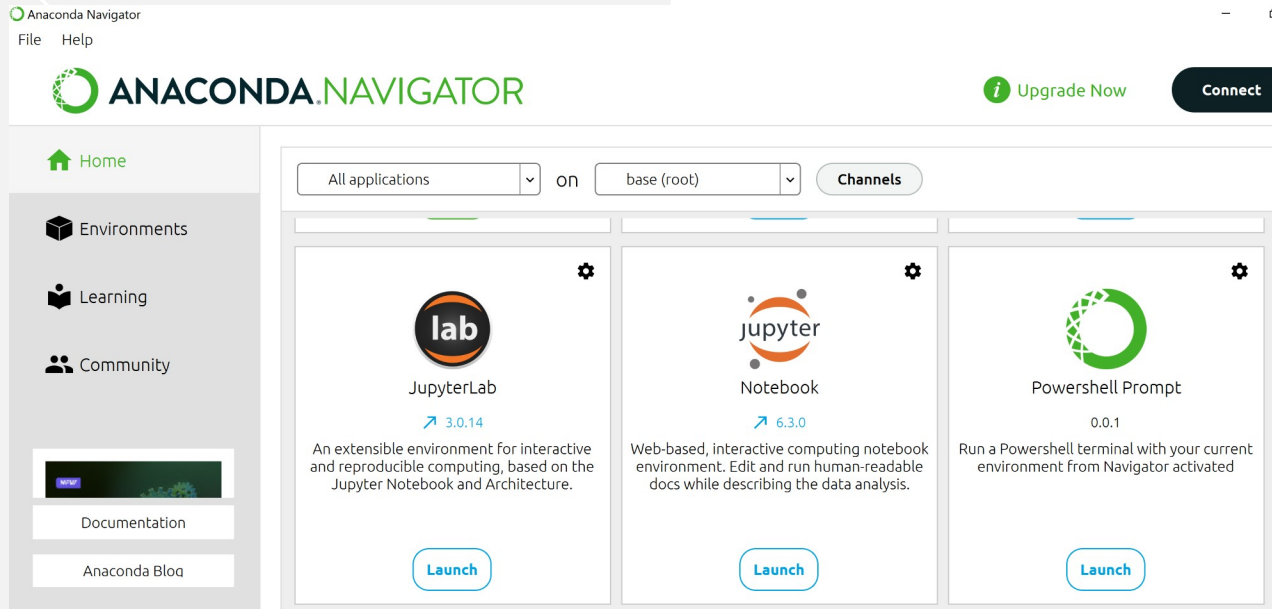
*Seleccioná tu entorno de Anaconda en VS Code.*





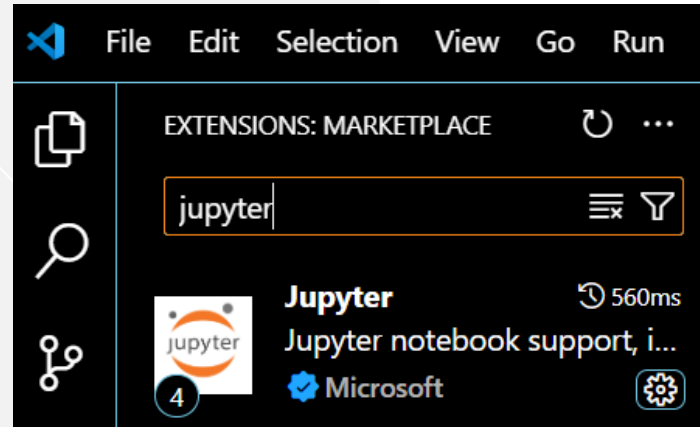
# Jupyter en Anaconda Navigator

*Iniciá Jupyter Notebook desde Anaconda Navigator.*



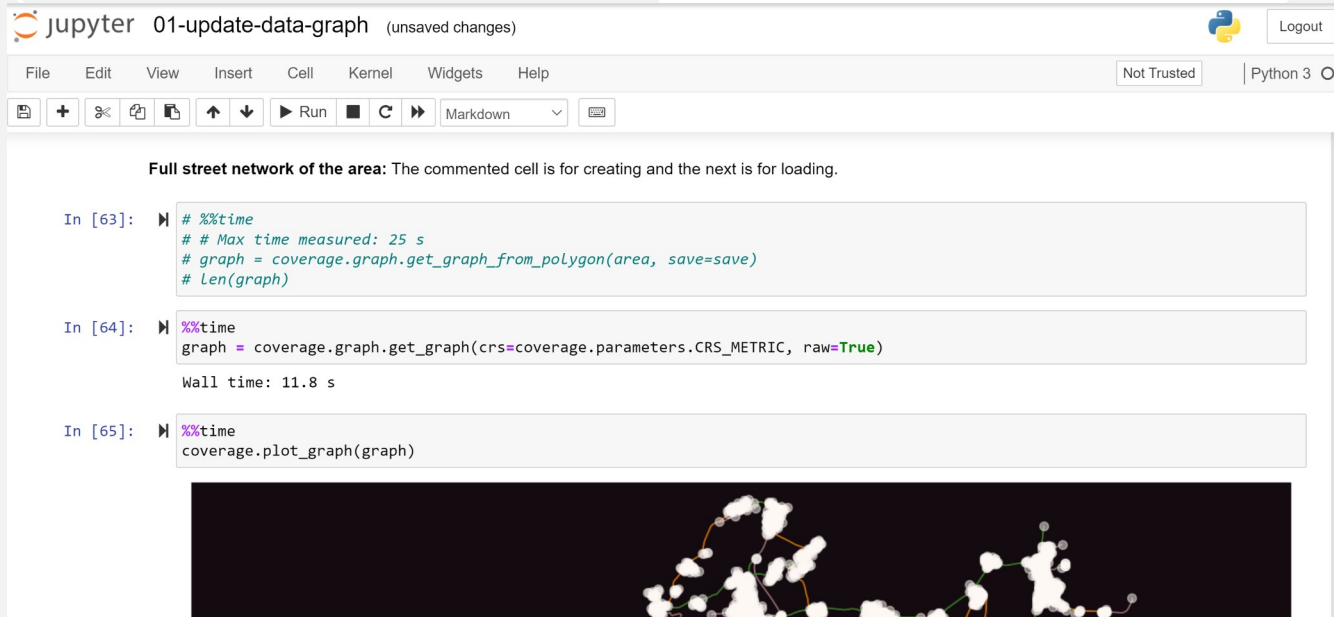
# Jupyter en VS Code

*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 a text cell followed by three code cells:

**Full street network of the area:** The commented cell is for creating and the next is for loading.

```
In [63]: ▶ # %%time
          # # Max time measured: 25 s
          # graph = coverage.graph.get_graph_from_polygon(area, save=save)
          # Len(graph)
```

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

          Wall time: 11.8 s
```

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

At the bottom of the notebook, a graph visualization is displayed, showing a network of nodes and edges in white and orange on a black background.

# Instalación de Paquetes

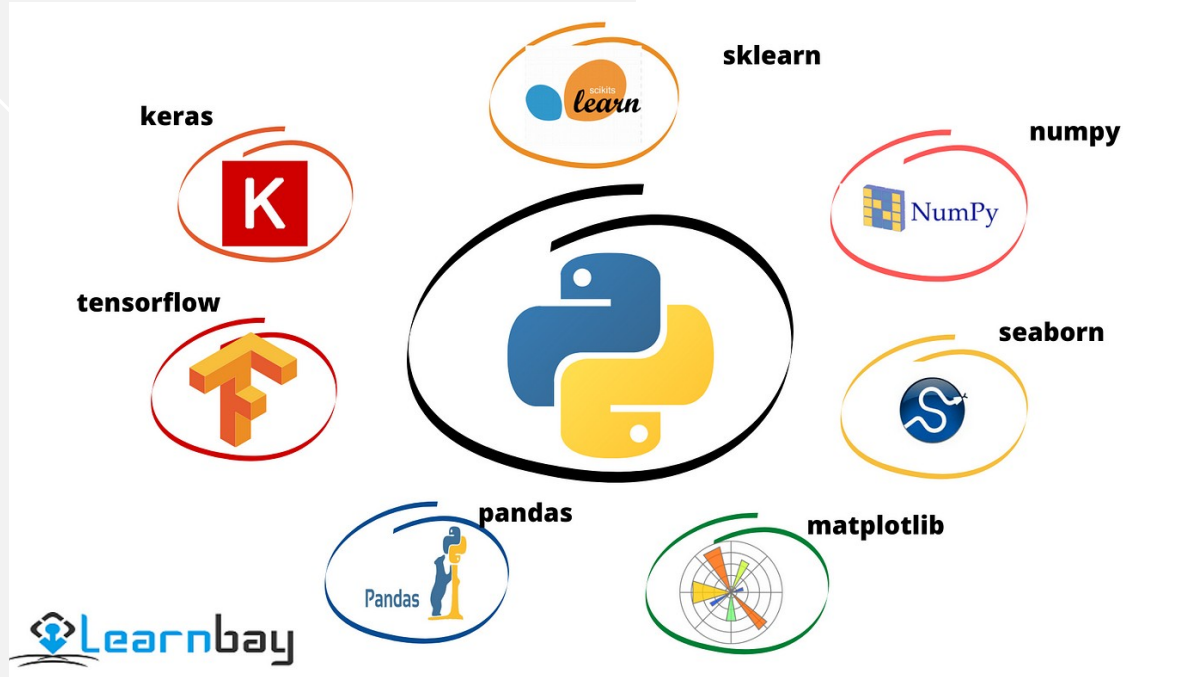
*Usa "conda install" o "pip install" para agregar librerías.*

```
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?**