Python y PIP

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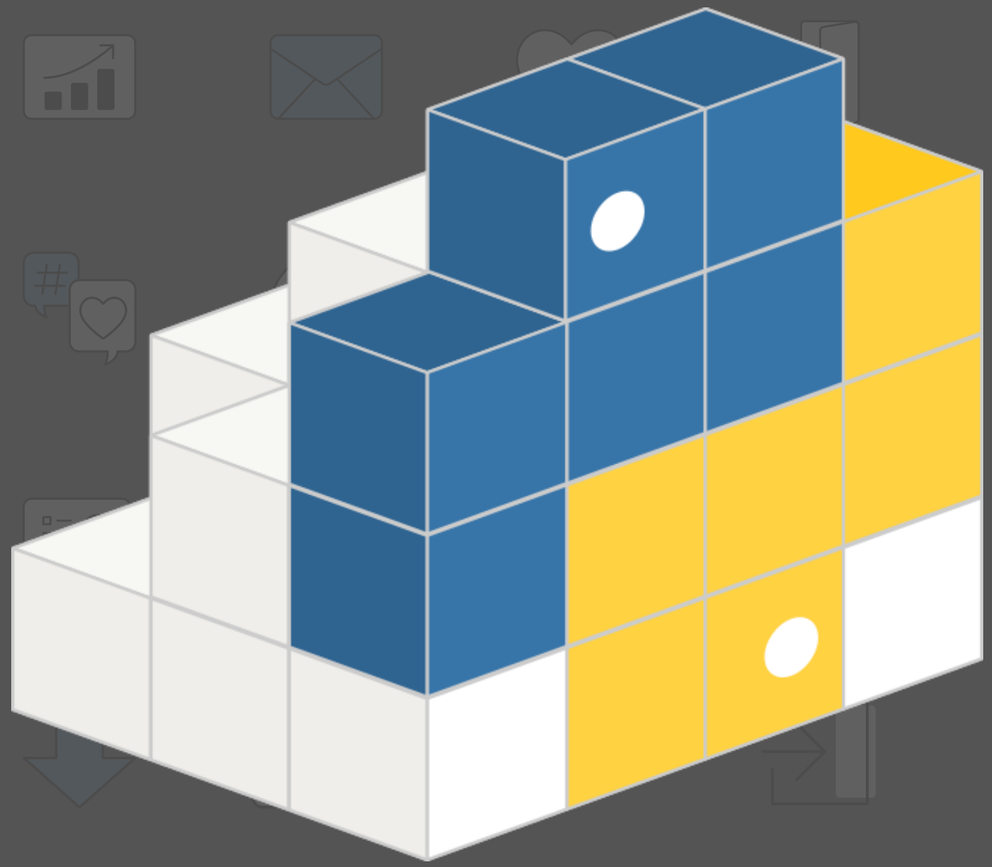
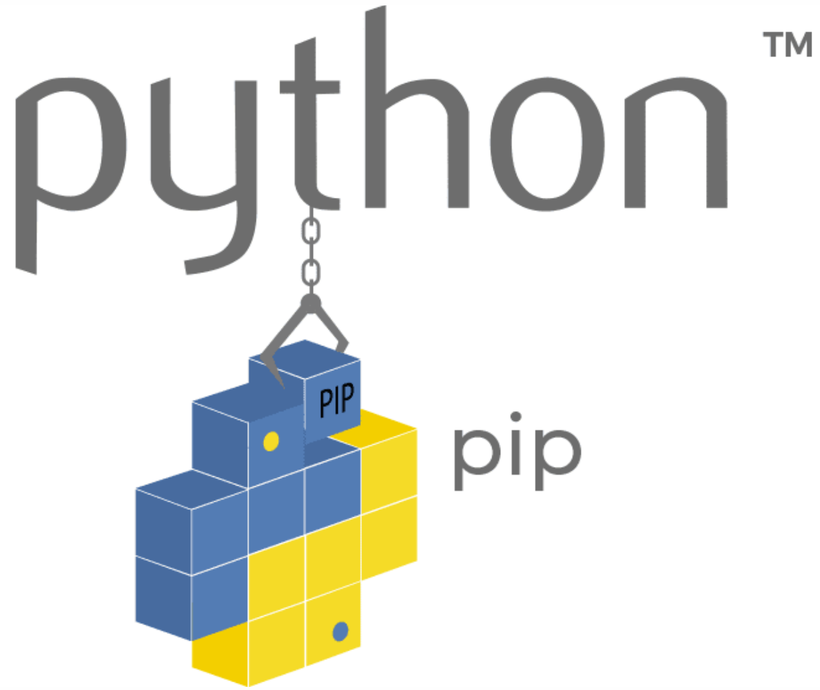


Ingeniería de Software II - 2022

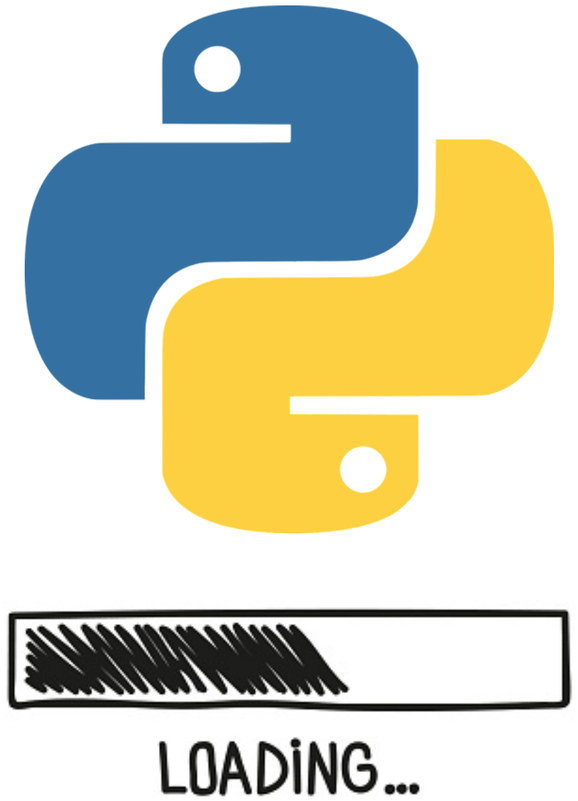
Python es un lenguaje de programación creado por Guido van Rossum a principios de los años 90.
Se trata de un lenguaje interpretado o de script, con tipado dinámico, fuertemente tipado, multiplataforma y orientado a objetos.

Pip es el instalador o gestor de paquetes para Python.



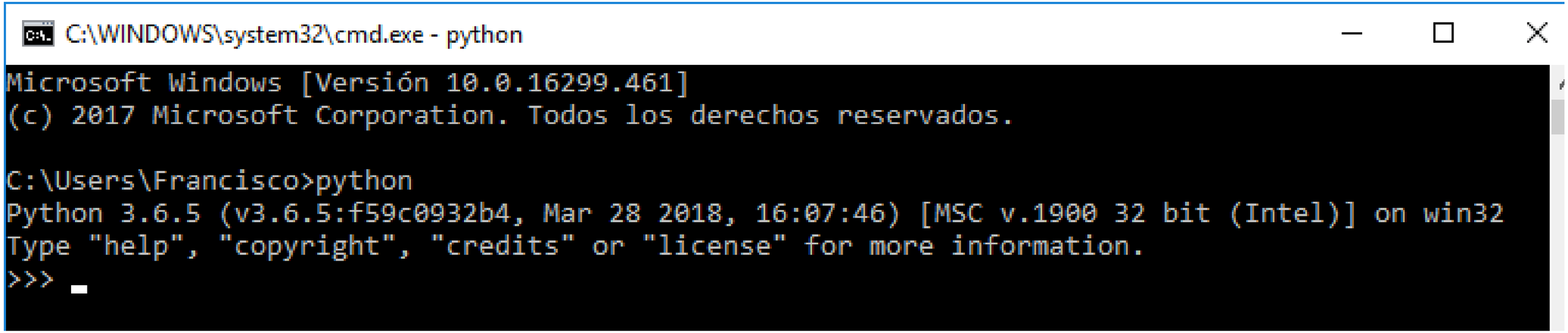
https://www.python.org/

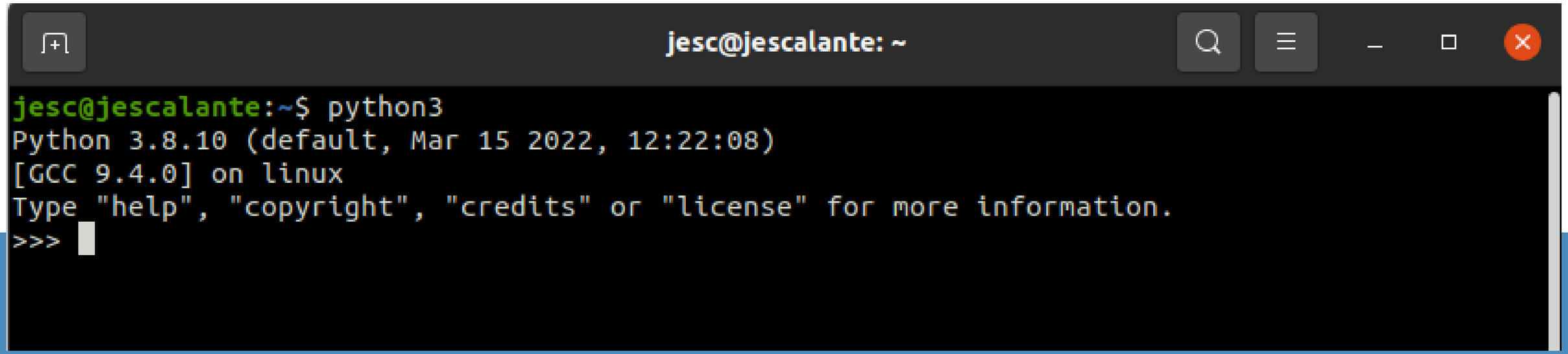
1° Paso: Instalar Python 3



Instaladores

¿Como saber si tengo Python instalado?





¿Cómo saber si tengo PIP instalado?

```
Usage:
  pip <command> [options]
```

```
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  pip <command> [options]

Commands:
  install                     Install packages.
  download                    Download packages.
  uninstall                   Uninstall packages.
  freeze                      Output installed packages in requirements format.
  list                        List installed packages.
  show                        Show information about installed packages.
  check                       Verify installed packages have compatible dependencies.
  config                      Manage local and global configuration.
  search                      Search PyPI for packages.
  wheel                       Build wheels from your requirements.
  hash                        Compute hashes of package archives.
  completion                  A helper command used for command completion.
  debug                       Show information useful for debugging.
  help                        Show help for commands.

General Options:
  -h, --help                  Show help.
  --isolated                  Run pip in an isolated mode, ignoring
                              environment variables and user configuration.
  -v, --verbose               Give more output. Option is additive, and can be
                              used up to 3 times.
  -V, --version               Show version and exit.
  -q, --quiet                 Give less output. Option is additive, and can be
                              used up to 3 times (corresponding to WARNING,
                              ERROR, and CRITICAL logging levels).
  --log <path>                Path to a verbose appending log.
  --proxy <proxy>             Specify a proxy in the form
                              [user:passwd@]proxy.server:port.
  --retries <retries>         Maximum number of retries each connection should
```
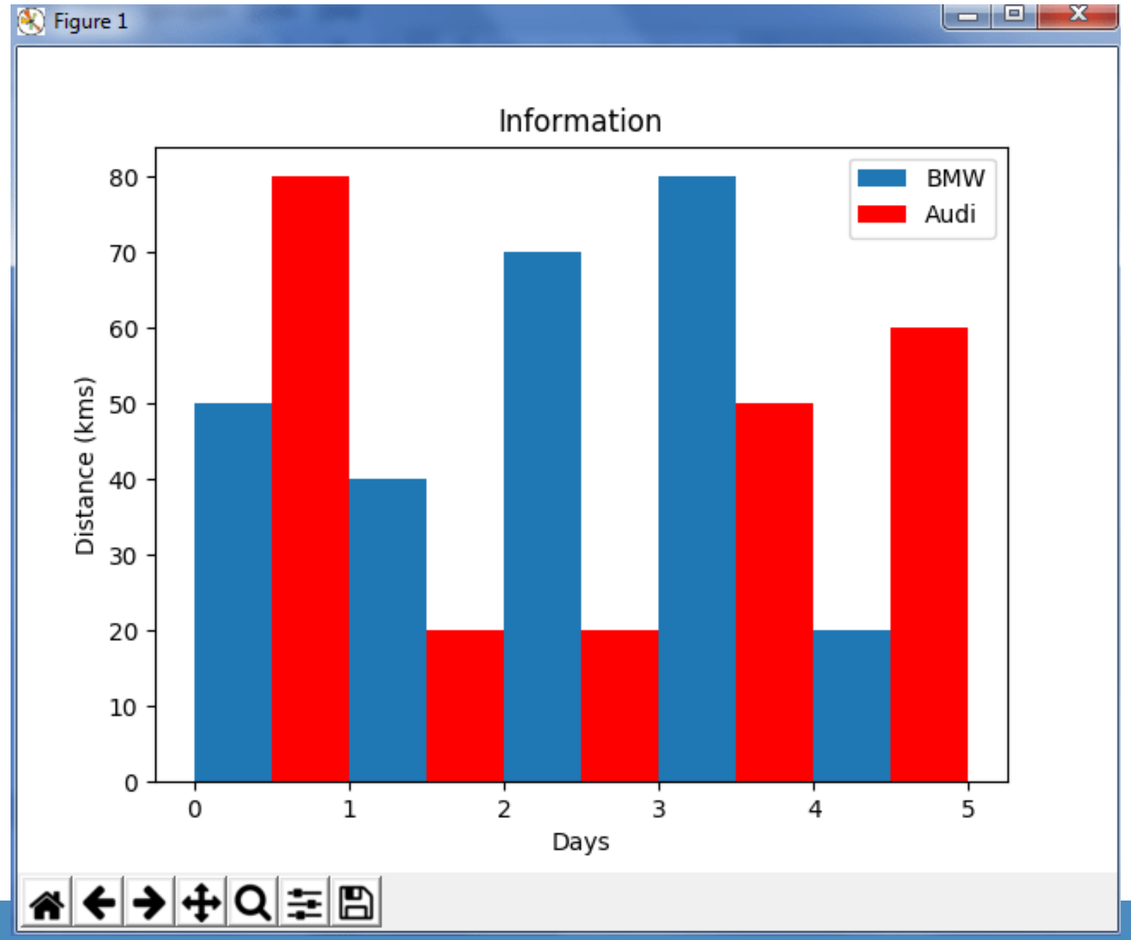
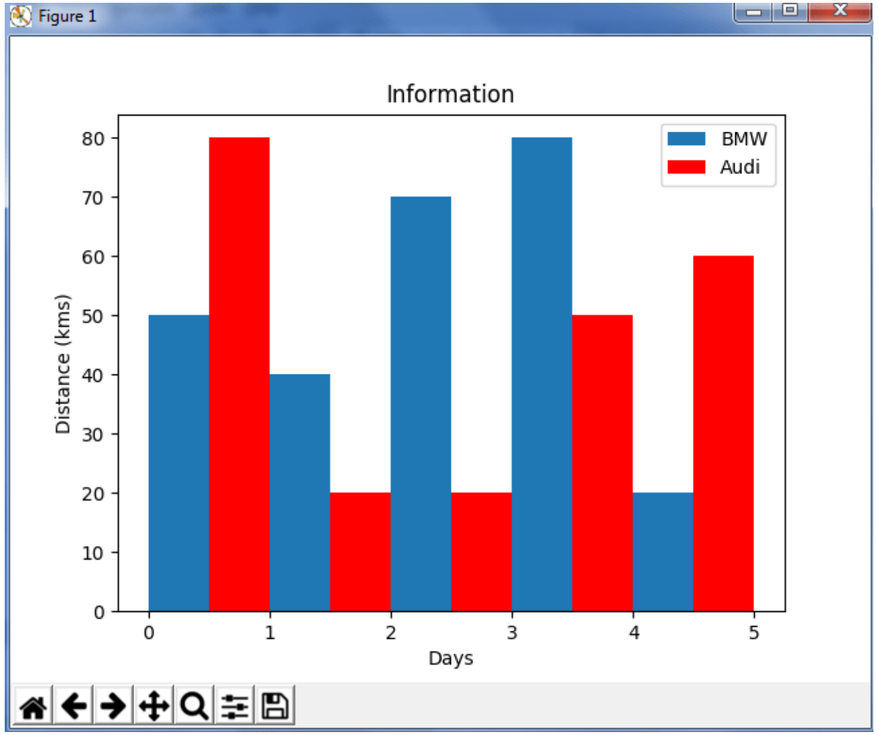

¿Cómo usar PIP?



> pip install matplotlib

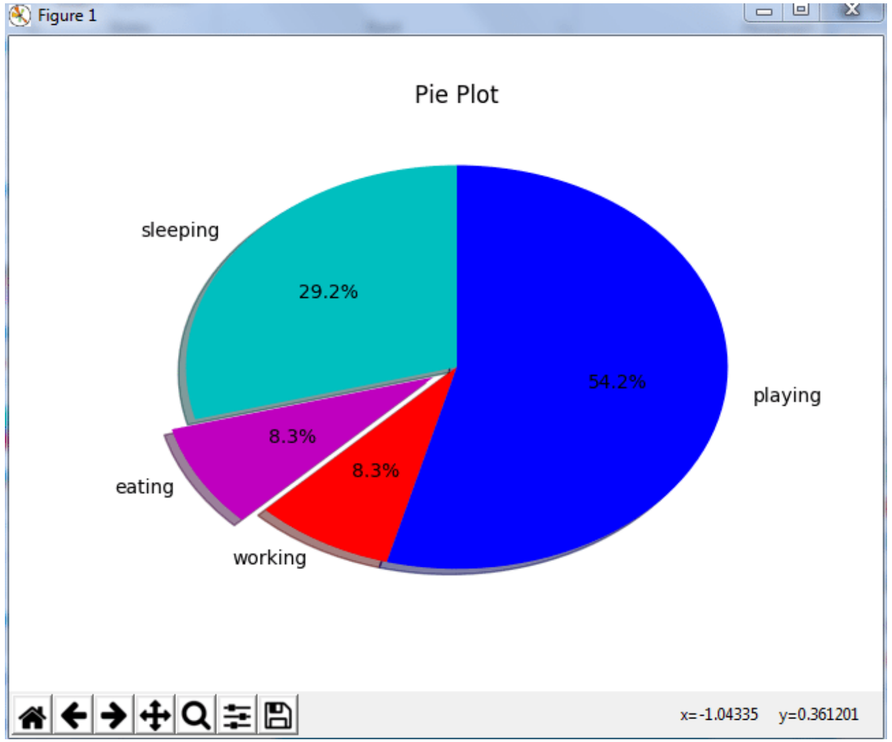
Matplotlib - Bar



bar.py

```python
from matplotlib import pyplot as plt

plt.bar([0.25,1.25,2.25,3.25,4.25],[50,40,70,80,20],
label="BMW",width=.5)
plt.bar([.75,1.75,2.75,3.75,4.75],[80,20,20,50,60],
label="Audi", color='r',width=.5)
plt.legend()
plt.xlabel('Days')
plt.ylabel('Distance (kms)')
plt.title('Information')
plt.show()
```

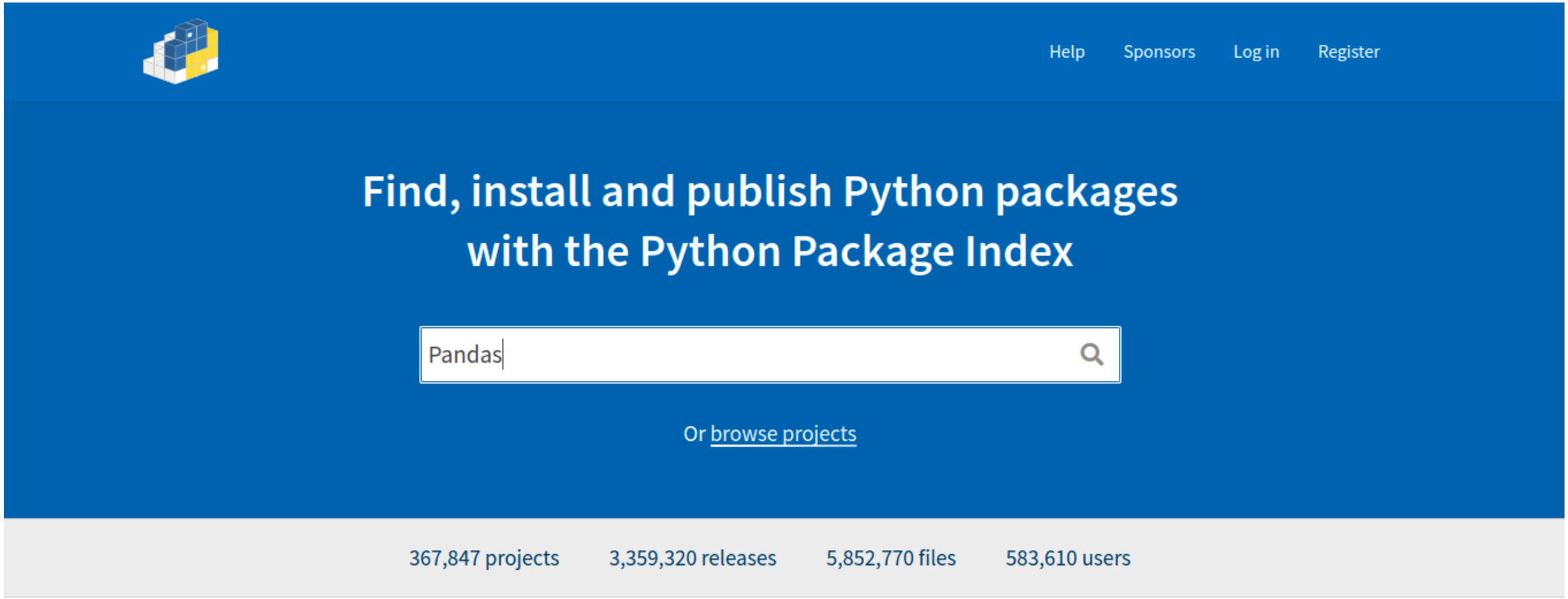
Matplotlib - Pie



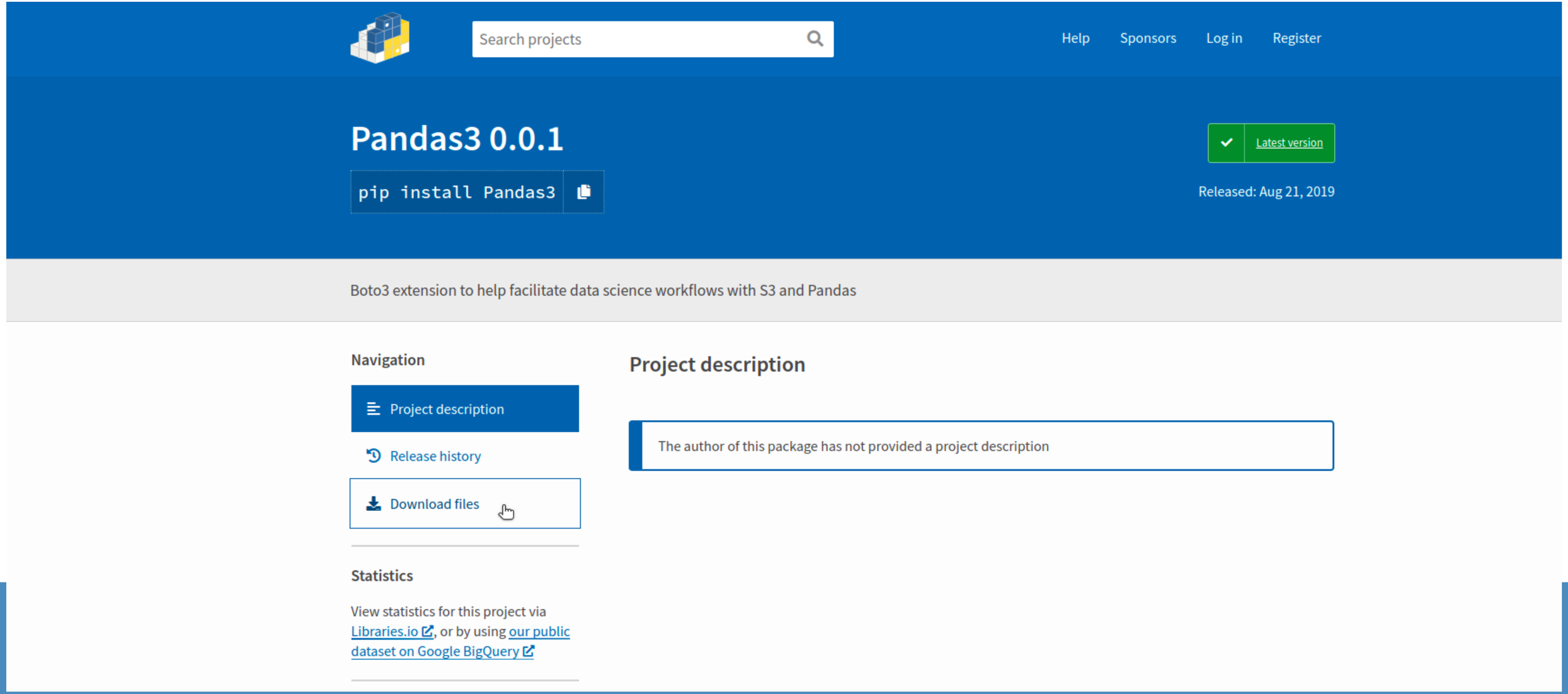
pie.py > ...

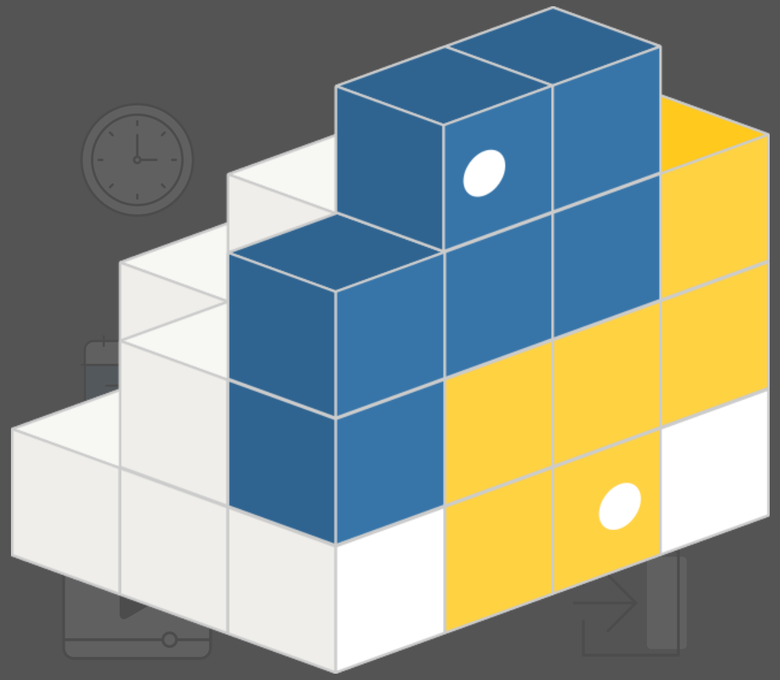
```python
import matplotlib.pyplot as plt

days = [1,2,3,4,5]

sleeping =[7,8,6,11,7]
eating = [2,3,4,3,2]
working =[7,8,7,2,2]
playing = [8,5,7,8,13]
slices = [7,2,2,13]
activities = ['sleeping','eating','working','playing']
cols = ['c','m','r','b']

plt.pie(slices,
    labels=activities,
    colors=cols,
    startangle=90,
    shadow= True,
    explode=(0,0.1,0,0),
    autopct='%1.1f%%')

plt.title('Pie Plot')
plt.show()
```

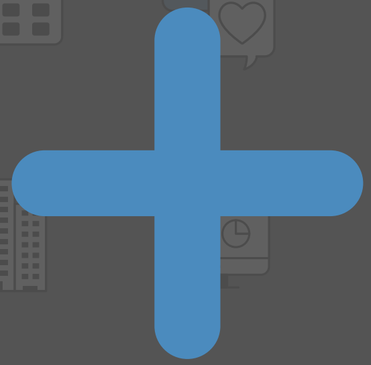
¿Qué es Pypi.org?



¿Qué es Pypi.org?








jupyter

Jupyter Notebook es una aplicación web de código abierto que le permite crear y compartir documentos que contienen código en vivo, ecuaciones, visualizaciones y texto narrativo. Los usos incluyen: limpieza y transformación de datos, Visualización de datos, ML, entre otros

> pip install jupyter

https://jupyter.org/