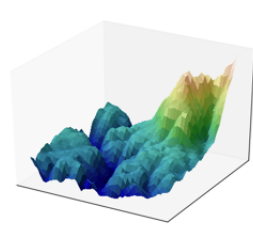
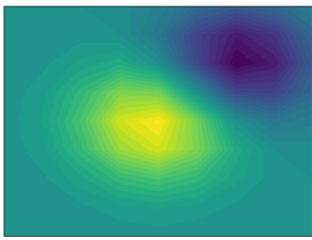
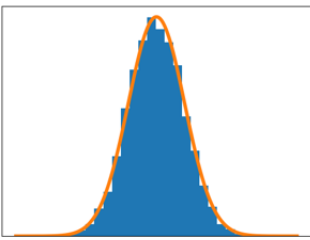
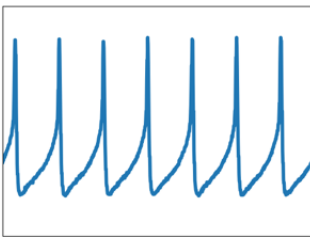


Matplotlib: Visualization with Python

Matplotlib is a comprehensive library for creating static, animated, and interactive visualizations in Python.



Matplotlib makes easy things easy and hard things possible.

Create

- Develop **publication quality plots** with just a few lines of code
- Use **interactive figures** that can zoom, pan, update...

Customize

- Take full control** of line styles, font properties, axes properties...
- Export and embed** to a number of file formats and interactive environments

Extend

- Explore tailored functionality provided by **third party packages**
- Learn more about Matplotlib through the many **external learning resources**

Documentation

To get started, read the **User's Guide**.

Trying to learn how to do a particular kind of plot? Check out the **examples gallery** or the **list of plotting commands**.

Join our community!

Matplotlib is a welcoming, inclusive project, and we follow the **Python Software Foundation Code of Conduct** in everything we do.

Get help



Join our community at **discourse.matplotlib.org** to get help, discuss contributing & development, and share your work.



If you have questions, be sure to check the **FAQ**, the **API docs**. The full text **search** is a good way to discover the docs including the many examples.



Check out the Matplotlib tag on **stackoverflow**.



Short questions may be posted on the **gitter channel**.

News



To keep up to date with what's going on in Matplotlib, see the **what's new** page or browse the **source code**. Anything that could require changes to your existing code is logged in the **API changes** file.



- Tweet us at **@matplotlib!**
- See cool plots on **@matplotart** Instagram!
- Check out our **Blog!**

Development



Matplotlib is hosted on **GitHub**.

- File bugs and feature requests on the **issue tracker**.
- Pull requests** are always welcome.

It is a good idea to ping us on **Discourse** as well.



Mailing lists

- matplotlib-users** for usage questions
- matplotlib-devel** for development
- matplotlib-announce** for project announcements

Toolkits

Matplotlib ships with several add-on **toolkits**, including 3D plotting with `mplot3d`, axes helpers in `axes_grid1` and axis helpers in `axisartist`.

Third party packages

A large number of **third party packages** extend and build on Matplotlib functionality, including several higher-level plotting interfaces (**seaborn**, **HoloViews**, **ggplot**, ...), and two projection and mapping toolkits (**Basemap** and **Cartopy**).

Citing Matplotlib

Matplotlib is the brainchild of John Hunter (1968-2012), who, along with its many contributors, have put an immeasurable amount of time and effort into producing a piece of software utilized by thousands of scientists worldwide.

If Matplotlib contributes to a project that leads to a scientific publication, please acknowledge this work by citing the project. A **ready-made citation entry** is available.

Open source

Matplotlib is a Sponsored Project of NumFOCUS, a 501(c)(3) nonprofit charity in the United States. NumFOCUS provides Matplotlib with fiscal, legal, and administrative support to help ensure the health and sustainability of the project. Visit **numfocus.org** for more information.

Donations to Matplotlib are managed by NumFOCUS. For donors in the United States, your gift is tax-deductible to the extent provided by law. As with any donation, you should consult with your tax adviser about your particular tax situation.

Please consider **donating to the Matplotlib project** through the NumFOCUS organization or to the **John Hunter Technology Fellowship**.

The **Matplotlib license** is based on the **Python Software Foundation (PSF) license**.

There is an active developer community and a long list of people who have made significant **contributions**.

Latest release candidate
3.3.0rc1: [docs](#) | [changelog](#)

Latest release
3.2.2: [docs](#) | [changelog](#)

Last release for Python 2
2.2.5: [docs](#) | [changelog](#)

Development version
[docs](#)

Support Matplotlib

