Search the docs ...

plot(x, y)
scatter(x, y)
bar(x, height) / barh(y, width)
stem(x, y)
step(x, y)
fill_between(x, y1, y2)
imshow(Z)
pcolormesh(X, Y, Z)
contour(X, Y, Z)
contourf(X, Y, Z)
barbs(X, Y, U, V)
quiver(X, Y, U, V)
streamplot(X, Y, U, V)
hist(x)
boxplot(X)
errorbar(x, y, yerr, xerr)
violinplot(D)
eventplot(D)

Plot types ¶

Overview of many common plotting commands in Matplotlib.

Note that we have stripped all labels, but they are present by default. See the gallery for many more examples and the tutorials page for longer examples.

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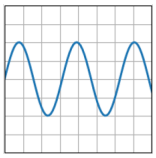
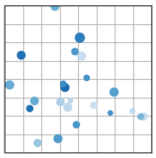
Basic

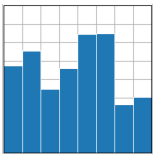
Basic plot types, usually y versus x.



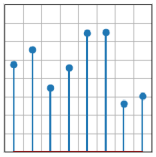
plot(x, y)



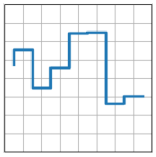
scatter(x, y)



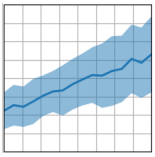
bar(x, height) / barh(y, width)



stem(x, y)



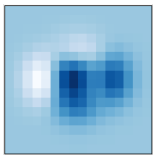
step(x, y)



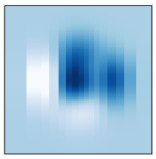
fill_between(x, y1, y2)

Plots of arrays and fields

Plotting for arrays of data `Z(x, y)` and fields `U(x, y)`, `V(x, y)`.



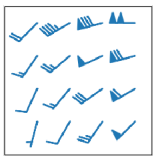
imshow(Z)



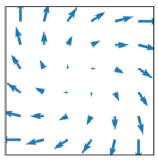
pcolormesh(X, Y, Z)

contour(X, Y, Z)

contourf(X, Y, Z)



barbs(X, Y, U, V)

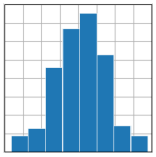


quiver(X, Y, U, V)

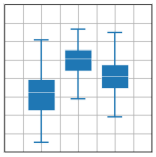
streamplot(X, Y, U, V)

Statistics plots

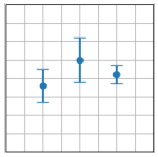
Plots for statistical analysis.



hist(x)

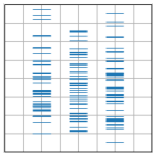


boxplot(X)

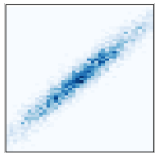


errorbar(x, y, yerr, xerr)

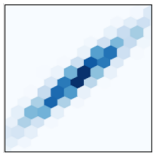
violinplot(D)



eventplot(D)



hist2d(x, y)

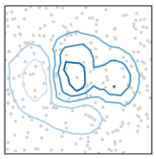


hexbin(x, y, C)

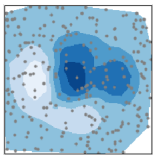
pie(x)

Unstructured coordinates

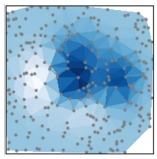
Sometimes we collect data `z` at coordinates `(x,y)` and want to visualize as a contour. Instead of gridding the data and then using **`contour`**, we can use a triangulation algorithm and fill the triangles.



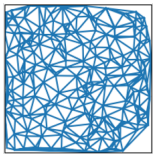
tricontour(x, y, z)



tricontourf(x, y, z)



tripcolor(x, y, z)



triplot(x, y)

Download all examples in Python source code: plot_types_python.zip

Download all examples in Jupyter notebooks: plot_types_jupyter.zip

Keywords: matplotlib code example, codex, python plot, pyplot

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