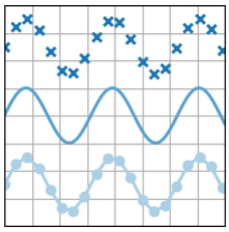
Plot types

Overview of many common plotting commands provided by Matplotlib.

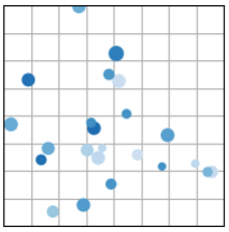
See the gallery for more examples and the tutorials page for longer examples.

Pairwise data

Plots of pairwise (x, y), tabular $(var\_0, \cdots, var\_n)$, and functional $f(x) = y$ data.

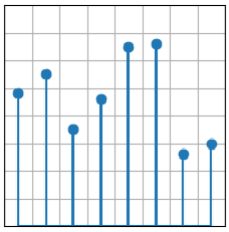


plot(x, y)

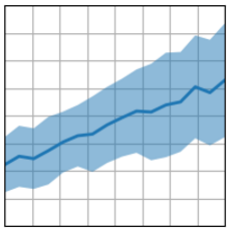


scatter(x, y)

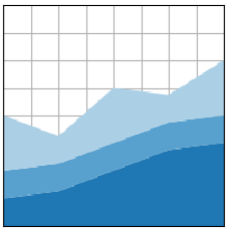
See ~matplotlib.axes.Axes



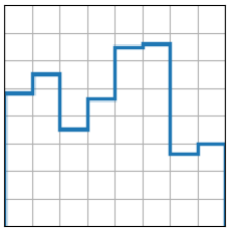
stem(x, y)



fill_between(x, y1, y2)



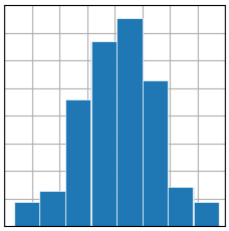
stackplot(x, y)



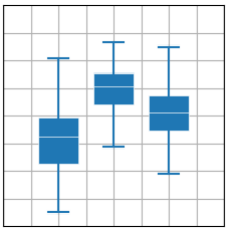
stairs(values)

Statistical distributions

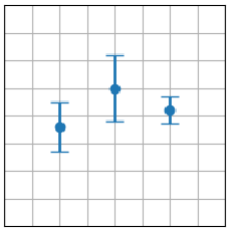
Plots of the distribution of at least one variable in a dataset. Some of these methods also compute the distributions.

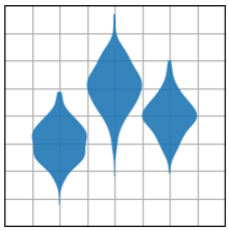


hist(x)



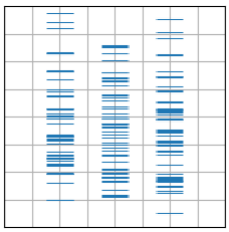
boxplot(X)



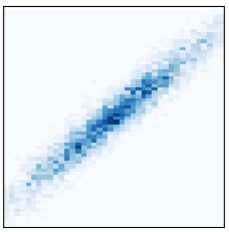


violinplot(D)

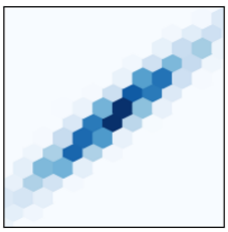
errorbar(x, y, yerr, xerr)



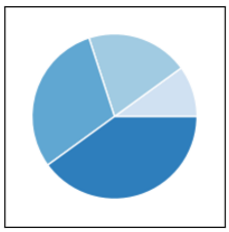
eventplot(D)



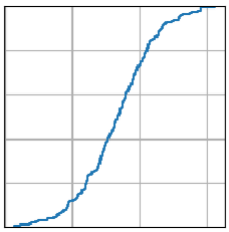
hist2d(x, y)



hexbin(x, y, C)



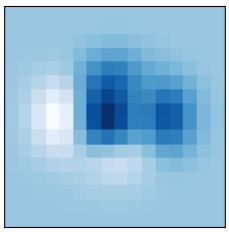
pie(x)



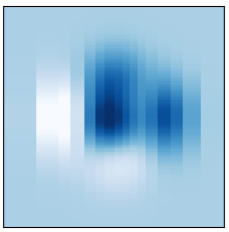
ecdf(x)

Gridded data

Plots of arrays and images $Z_{i,j}$ and fields $U_{i,j}, V_{i,j}$ on regular grids and corresponding coordinate grids $X_{i,j}, Y_{i,j}$.

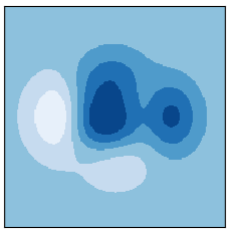


imshow(Z)

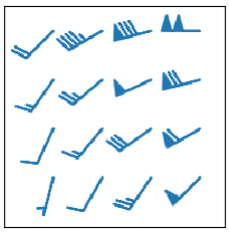


pcolormesh(X, Y, Z)

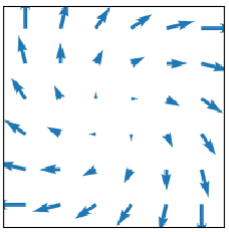
contour(X, Y, Z)



contourf(X, Y, Z)



barbs(X, Y, U, V)

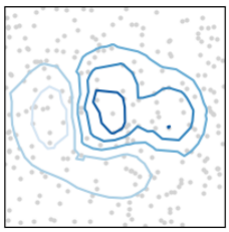


quiver(X, Y, U, V)

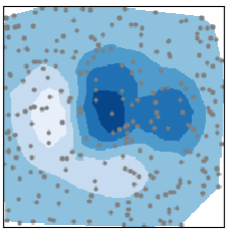
streamplot(X, Y, U, V)

Irregularly gridded data

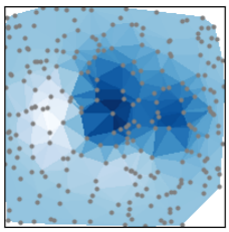
Plots of data $Z_{x,y}$ on unstructured grids , unstructured coordinate grids (x, y), and 2D functions $f(x, y) = z$.



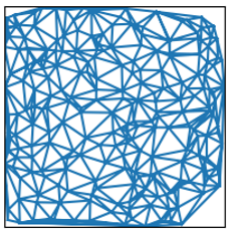
tricontour(x, y, z)



tricontourf(x, y, z)



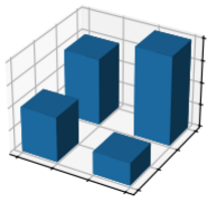
tripcolor(x, y, z)



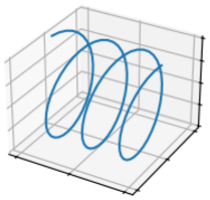
triplot(x, y)

3D and volumetric data

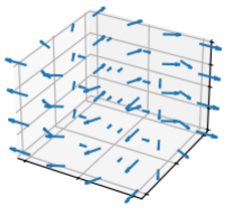
Plots of three-dimensional (x, y, z), surface $f(x, y) = z$, and volumetric $V_{x,y,z}$ data using the `mpl_toolkits.mplot3d` library.



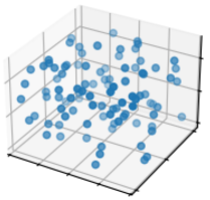
bar3d(x, y, z, dx, dy, dz)



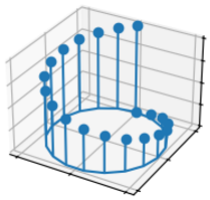
plot(xs, ys, zs)



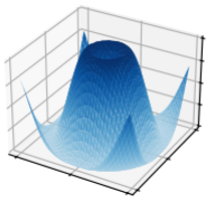
quiver(X, Y, Z, U, V, W)



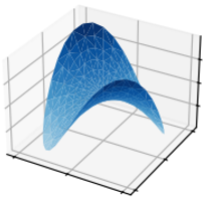
scatter(xs, ys, zs)



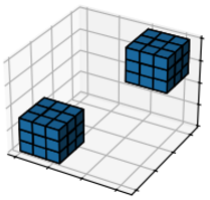
stem(x, y, z)



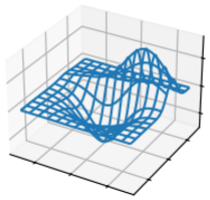
plot_surface(X, Y, Z)



plot_trisurf(x, y, z)



voxels([x, y, z], filled)



plot_wireframe(X, Y, Z)

Download all examples in Python source code: plot_types_python.zip

Download all examples in Jupyter notebooks: plot_types_jupyter.zip

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