

Cheat sheets

Elim Cheung

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`H, edges = np.histogram ( data, bins=bins, weights=weights, range=range, density=None )`

- bins : number of bins (int)
- weights : an array of weights (same dimension as data)
- range : a tuple of two floats i.e. range = (xmin, xmax)
- density : return probability density function (used when doing normalized plot)

for more info about np.histogram: [here](#)

`H, edges = np.histogram2d ( x_data, y_data, bins=bins, weights=weights, range=range )`

- bins : int OR an array OR [int, int] OR [array, array] OR [array, int] OR [int, array]
- weights : an array of weights (same dimension as x_data and y_data)
- range : a list of two lists i.e. range = [[xmin, xmax], [ymin, xmax]]

for more info about np.histogram2d: [here](#)

`H, edges = np.histogramdd ( data, bins=bins, weights=weights, range=range )`

- bins : int OR (array, ..., array) OR (int, ..., int)
- weights : an array of weights (same dimension as data slices)
- range : a list of two lists i.e. range = [[xmin, xmax], [ymin, xmax]]

for more info about np.histogramdd: [here](#)

`plt.plot ( x_data, y_data, ** kwargs )`

- `x_data` : an array of x values (e.g. bin edges)
 - `y_data` : an array of y values with same dimension as `x_data` (e.g. event counts)
 - `** kwargs` : keyword arguments (`linewidth`, `linestyle`, `drawstep`, `alpha`, `color`, `label`, etc ...)
- for more info about `plt.plot`: [here](#)

`plt.errorbar ( x_data, y_data, ** kwargs )`

- `** kwargs` : keyword arguments (`yerr`, `xerr`, `capsize`, `lolims`, `uplims`, `elinewidth`, etc ...)
- for more info about `plt.errorbar`: [here](#)

`plt.pcolormesh ( x_data, y_data, z_data, ** kwargs )`

- `x_data` : an array of x values (e.g. x bin edges)
 - `y_data` : an array of y values (e.g. y bin edges)
 - `z_data` : an array of z values with same dimension of (`Nx`, `Ny`) (e.g. event counts)
 - `** kwargs` : keyword arguments (`vmin`, `vmax`, `cmap`, `label`, etc ...)
- for more info about `plt.pcolormesh`: [here](#)

`plt.colorbar ( ** kwargs )`

- `** kwargs` : keyword arguments (`cax`, `ax`, `mappable`, etc ...)
- for more info about `plt.colorbar`: [here](#)

`axis.set_title ( Title, ** kwargs )`

— Title : a string of title

— ** kwargs : keyword arguments (fontdict, fontsize, loc, rotation, visible, etc ...)

for more info about `axis.set_title`: [here](#)

`axis.legend ( ** kwargs )`

— ** kwargs : keyword arguments (loc, prop, fontsize, labelspacing, borderpad, etc ...)

for more info about `axis.legend`: [here](#)

`axis.set_xlabel ( xLabel, ** kwargs )`

— xLabel : a string of x label

— ** kwargs : keyword arguments (fontdict, fontsize, labelpad, etc ...)

for more info about `axis.set_xlabel`: [here](#)

`axis.set_xlim ( xmin, xmax, ** kwargs )`

— xmin, xmax : a float OR int of minimum and maximum x value

— ** kwargs : keyword arguments (emit, auto, etc ...)

for more info about `axis.set_xlim`: [here](#)

`axis.axvline ( x=0, ** kwargs )`

— `x` : a `x` value where a vertical line is drawn

— `** kwargs` : keyword arguments (`ymin`, `ymax`, `linewidth`, `linestyle`, `color`, `alpha`, etc ...)

for more info about `axis.axvline`: [here](#)

`axis.axhline ( y=0, ** kwargs )`

— `y` : a `y` value where a horizontal line is drawn

— `** kwargs` : keyword arguments (`xmin`, `xmax`, etc ...)

for more info about `axis.axhline`: [here](#)

`axis.get_xaxis ( ) / axis.get_yaxis ( )`

— access `X / Y` axis instances (e.g. `axis.get_xaxis().set_visible (False)`)

for more info about `axis.XAxis`: [here](#)

`axis.get_major_ticks ( ) / axis.get_majortickloc ( ) / etc ...`

— access ticks instances

for more info about `axis.Tick`: [here](#)

```
matplotlib.rc ( 'font', family='serif' )
```

```
matplotlib.rc ( 'font', serif='Computer Modern Roman' )
```

```
matplotlib.rc ( 'text', usetex=True )
```

```
matplotlib.rcParams [ 'lines.linewidth' ] = 2
```

```
matplotlib.rcParams [ 'lines.color' ] = 'red'
```

```
matplotlib.rcParams [ 'xtick.major.size' ] = 3
```

```
matplotlib.rcParams [ 'xtick.minor.size' ] = 3
```

```
matplotlib.rcParams [ 'xtick.major.width' ] = 1
```

```
matplotlib.rcParams [ 'xtick.minor.width' ] = 1
```

```
matplotlib.rcParams [ 'ytick.major.size' ] = 3
```

```
matplotlib.rcParams [ 'ytick.minor.size' ] = 3
```

```
matplotlib.rcParams [ 'ytick.major.width' ] = 1
```

```
matplotlib.rcParams [ 'ytick.minor.width' ] = 1
```

** for list of keys/values for all rcParams: [here](#)