

# matplotlib

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Version 3.2.1

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## matplotlib.pyplot.figure

```
matplotlib.pyplot.figure(num=None, figsize=None, dpi=None,
facecolor=None, edgecolor=None, frameon=True, FigureClass=
<class 'matplotlib.figure.Figure'>, clear=False,
**kwargs)
```

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Create a new figure.

### Parameters:

**num** : int or str, optional, default: None

If not provided, a new figure will be created, and the figure number will be incremented. The figure object holds this number in a `number` attribute. If `num` is provided, and a figure with this id already exists, make it active, and returns a reference to it. If this figure does not exist, create it and returns it. If `num` is a string, the window title will be set to this figure's `num`.

**figsize** : (float, float), optional, default: None

width, height in inches. If not provided, defaults to `rcParams["figure.figsize"]` (default: [6.4, 4.8]) = [6.4, 4.8].

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**dpi** : integer, optional, default: None

resolution of the figure. If not provided, defaults to

`rcParams["figure.dpi"]`  
(default: 100.0) = 100.

**facecolor** : color

the background color. If not provided, defaults to

`rcParams["figure.facecolor"]`  
(default: 'white') = 'w'.

**edgecolor** : color

the border color. If not provided, defaults to

`rcParams["figure.edgecolor"]`  
(default: 'white') = 'w'.

**frameon** : bool, optional, default: True

If False, suppress drawing the figure frame.

**FigureClass** : subclass of `Figure`

Optionally use a custom `Figure` instance.

**clear** : bool, optional, default: False

If True and the figure already exists, then it is cleared.

**Returns:**

**figure** : `Figure`

The `Figure` instance returned will also be passed to `new_figure_manager` in the backends, which allows to hook custom `Figure` classes into the

pyplot interface. Additional  
kwargs will be passed to the  
`Figure` init function.

## Notes

If you are creating many figures, make sure you explicitly call `pyplot.close` on the figures you are not using, because this will enable pyplot to properly clean up the memory.

`rcParams` defines the default values, which can be modified in the `matplotlibrc` file.

## Examples using `matplotlib.pyplot.figure`



The double  
pendulum problem



Frame grabbing



Hyperlinks



Rotating a 3D plot



Rotating 3D  
wireframe plot



SVG Histogram



Tool Manager



Pgf Preamble

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