

Plotly | Graphing Libraries ([https://plotly.com/\(/graphing-libraries/\)](https://plotly.com/(/graphing-libraries/)))  
utm\_campaign=studio\_cloud\_launch&utm\_content=sidebar)



# Plotly Open Source Graphing Library for Python

Plotly's Python graphing library makes interactive, publication-quality graphs. Examples of how to make line plots, scatter plots, area charts, bar charts, error bars, box plots, histograms, heatmaps, subplots, multiple-axes, polar charts, and bubble charts.

Plotly.py is [free and open source \(/python-is-plotly-free/\)](https://python-is-plotly-free/) and you can [view the source, report issues or contribute on GitHub \(/github.com/plotly/plotly.py\)](https://github.com/plotly/plotly.py).

Plotly Studio: Transform any dataset into an interactive data application in minutes with AI. [Sign up for early access now. \(/plotly.com/studio/?utm\\_medium=graphing-libraries&utm\\_campaign=studio\\_early\\_access&utm\\_content=sidebar\)](https://plotly.com/studio/?utm_medium=graphing-libraries&utm_campaign=studio_early_access&utm_content=sidebar)

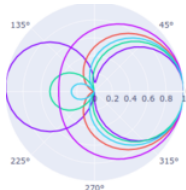
## Fundamentals

More Fundamentals » ([/python/plotly-fundamentals/](https://python/plotly-fundamentals/))



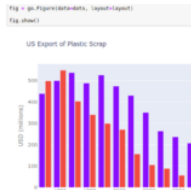
([/python/figure-structure/](https://python/figure-structure/))

The Figure Data Structure



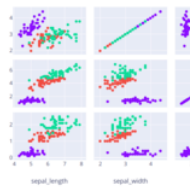
([/python/creating-and-updating-figures/](https://python/creating-and-updating-figures/))

Creating and Updating Figures



([/python/renderers/](https://python/renderers/))

Displaying Figures



([/python/plotly-express/](https://python/plotly-express/))

Plotly Express

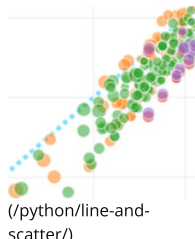


(<https://dash.plotly.com/>)

Analytical Apps with Dash

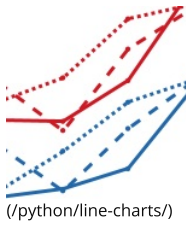
## Basic Charts

More Basic Charts » ([/python/basic-charts/](https://python/basic-charts/))



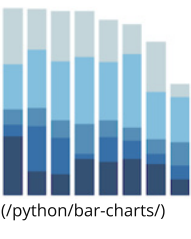
([/python/line-and-scatter/](https://python/line-and-scatter/))

Scatter Plots



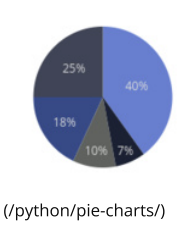
([/python/line-charts/](https://python/line-charts/))

Line Charts



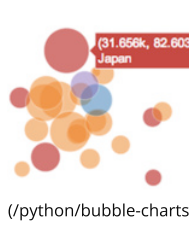
([/python/bar-charts/](https://python/bar-charts/))

Bar Charts



([/python/pie-charts/](https://python/pie-charts/))

Pie Charts

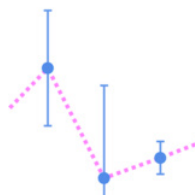


([/python/bubble-charts/](https://python/bubble-charts/))

Bubble Charts

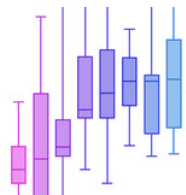
## Statistical Charts

More Statistical Charts » ([/python/statistical-charts/](https://python/statistical-charts/))



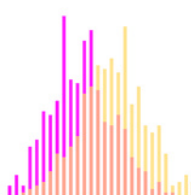
([/python/error-bars/](https://python/error-bars/))

Error Bars



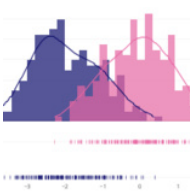
([/python/box-plots/](https://python/box-plots/))

Box Plots



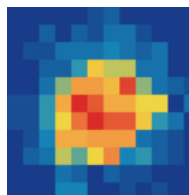
([/python/histograms/](https://python/histograms/))

Histograms



([/python/distplot/](https://python/distplot/))

Distplots

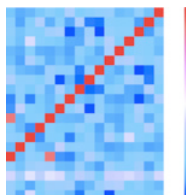
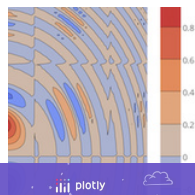


([/python/2D-Histogram/](https://python/2D-Histogram/))

2D Histograms

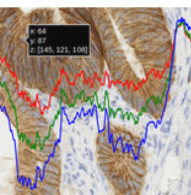
## Scientific Charts

More Scientific Charts » ([/python/scientific-charts/](https://python/scientific-charts/))



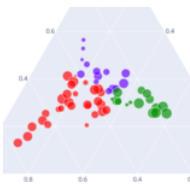
([/python/heatmaps/](https://python/heatmaps/))

Heatmaps



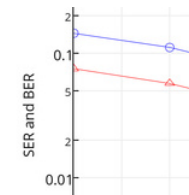
([/python/imshow/](https://python/imshow/))

Imshow



([/python/ternary-plots/](https://python/ternary-plots/))

Ternary Plots



([/python/log-plot/](https://python/log-plot/))

Log Plots

More Financial Charts » ([/python/financial-charts/](https://python/financial-charts/))



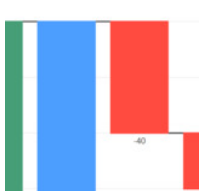
(/python/time-series/)

**Time Series and Date Axes**



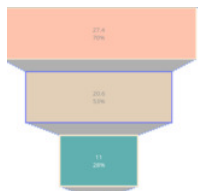
(/python/candlestick-charts/)

**Candlestick Charts**



(/python/waterfall-charts/)

**Waterfall Charts**



(/python/funnel-charts/)

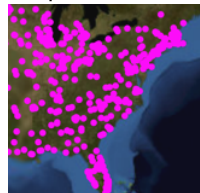
**Funnel Chart**



(/python/ohlc-charts/)

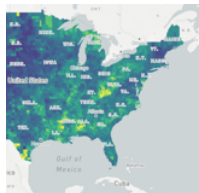
**OHLC Charts**

## Maps



(/python/mapbox-to-maplibre/)

**MapLibre Migration**



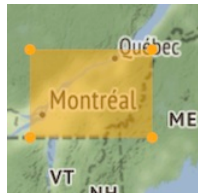
(/python/tile-county-choropleth/)

**Tile Choropleth Maps**



(/python/lines-on-tile-maps/)

**Lines on Tile Maps**



(/python/filled-area-tile-maps/)

**Filled Area on Tile Maps**

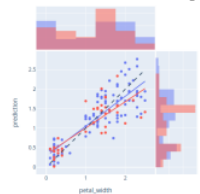


(/python/bubble-maps/)

**Bubble Maps**

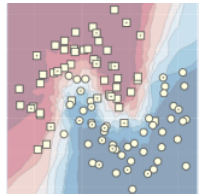
More Maps » (/python/maps/)

## Artificial Intelligence and Machine Learning



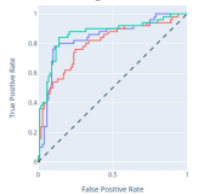
(/python/ml-regression/)

**ML Regression**



(/python/knn-classification/)

**kNN Classification**



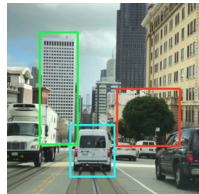
(/python/roc-and-pr-curves/)

**ROC and PR Curves**



(/python/pca-visualization/)

**PCA Visualization**

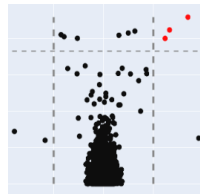


(https://plotly.com/building-machine-learning-web-apps-in-python/)

**AI/ML Apps with Dash**

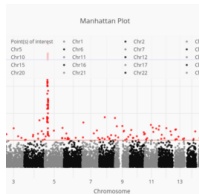
More AI and ML » (/python/ai-ml/)

## Bioinformatics



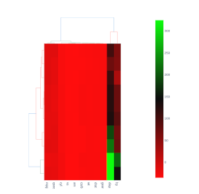
(/python/volcano-plot/)

**Volcano Plot**



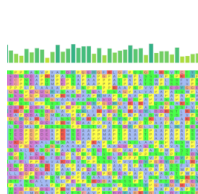
(/python/manhattan-plot/)

**Manhattan Plot**



(/python/clustergram/)

**Clustergram**

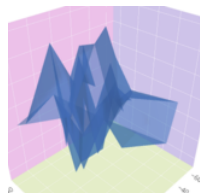


(/python/alignment-chart/)

**Alignment Chart**

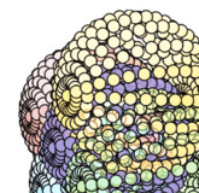
More Bioinformatics » (/python/bio/)

## 3D Charts



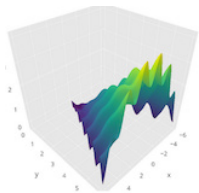
(/python/3d-axes/)

**3D Axes**



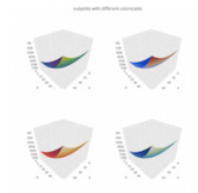
(/python/3d-scatter-plots/)

**3D Scatter Plots**



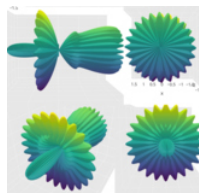
(/python/3d-surface-plots/)

**3D Surface Plots**



(/python/3d-subplots/)

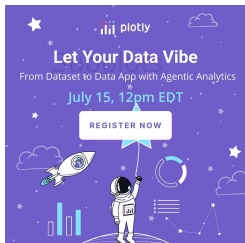
**3D Subplots**

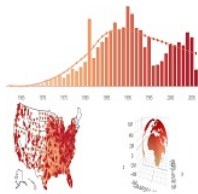


(/python/3d-camera-controls/)

**3D Camera Controls**

More 3D Charts » (/python/3d-charts/)





(/python/mixed-subplots/)

**Mixed Subplots**



(/python/map-subplots-and-small-multiples/)

**Map Subplots**



(/python/table-subplots/)

**Table and Chart Subplots**



(/python/figure-factory-subplots/)

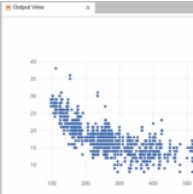
**Figure Factory Subplots**

Jupyter Widgets Interaction



(/python/figurewidget/)

**Plotly FigureWidget Overview**



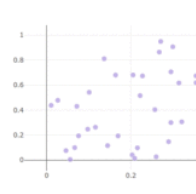
(/python/jupyter-lab-tools/)

**Jupyter Lab with FigureWidget**



(/python/figurewidget-app/)

**Interactive Data Analysis with FigureWidget ipywidgets**



(/python/click-events/)

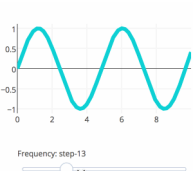
**Click Events**

Add Custom Controls



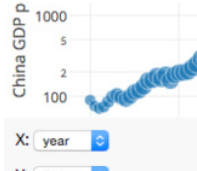
(/python/custom-buttons/)

**Custom Buttons**



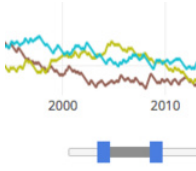
(/python/sliders/)

**Sliders**



(/python/dropdowns/)

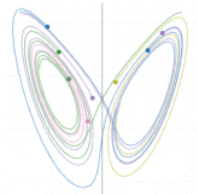
**Dropdown Menus**



(/python/range-slider/)

**Range Slider and Selector**

Animations



(/python/animations/)

**Intro to Animations**

Advanced

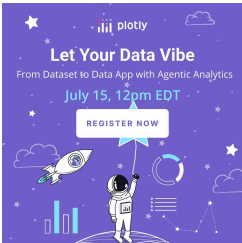
Plot CSV Data  
(/python/plot-data-from-csv/)

Random Walk  
(/python/random-walk/)


Peak Finding  
(/python/peak-finding/)

Smoothing  
(/python/smoothing/)

LaTeX  
(/python/LaTeX/)



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e/index/ )  
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lotly.py)



# Dash your way to interactive web apps.

No JavaScript required!

GET STARTED NOW


### My First App with Data, Graph, and Controls

pop

lifeExp

gdpPerCap

country	pop	continent	lifeExp	gdpPerCap
Afghanistan	31889923	Asia	43.828	974.5883384
Albania	2600523	Europe	76.423	5937.629525999999
Algeria	33333216	Africa	72.361	6223.367465
Angola	12428676	Africa	42.731	4707.231267
Argentina	40301927	Americas	75.32	12779.37964
Australia	20434176	Oceania	81.235	34435.367439999995
Austria	8199783	Europe	79.829	36126.4927
Bahrain	708573	Asia	75.635	29796.04834
Bangladesh	158448339	Asia	64.062	1501.253792
Belgium	10592226	Europe	79.441	33692.04908
Benin	8078314	Africa	56.728	1441.284873
Bolivia	9119152	Americas	65.554	3822.137884



continent	avg lifeExp
Asia	~65
Europe	~75
Africa	~55
Americas	~70
Oceania	~78

([https://dash.plotly.com/tutorial?utm\\_medium=graphing\\_libraries&utm\\_content=python\\_footer](https://dash.plotly.com/tutorial?utm_medium=graphing_libraries&utm_content=python_footer))

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