

plotly | Graphing Libraries ([https://plotly.com/\(/graphing-libraries/\)](https://plotly.com/(/graphing-libraries/)))

Enterprise%205.5&utm_medium=graphing_libraries&utm_content=sidebar)

JavaScript (/javascript) >
Statistical Charts
(/javascript/statistical-charts) >
Histograms



Suggest
an edit (https://github.com/plotly/graphing-library-docs/tree/master/_posts/plotly_js/statistical/histogram/)
to this page

Histograms in JavaScript

How to make a D3.js-based histogram in JavaScript. Seven examples of colored, horizontal, and normal histogram bar charts.

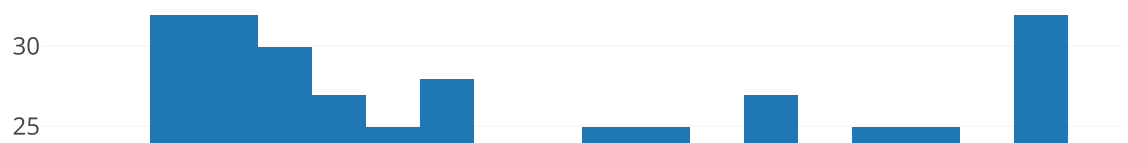
[New to Plotly?](#)

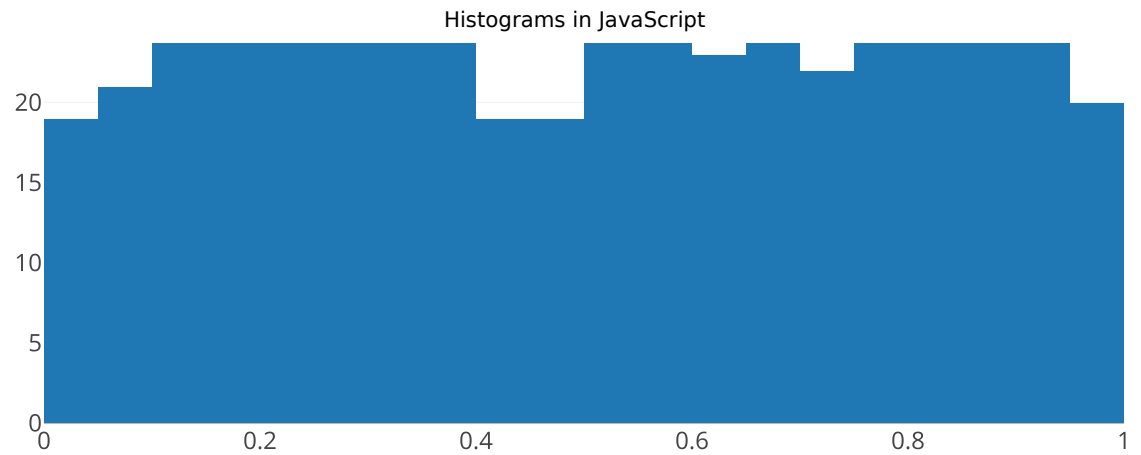
Basic Histogram

```
1  var x = [];  
2  for (var i = 0; i < 500; i ++) {  
3      x[i] = Math.random();  
4  }  
5  
6  var trace = {  
7      x: x,  
8      type: 'histogram',  
9  };  
10 var data = [trace];  
11 Plotly.newPlot('myDiv', data);  
12
```



Try It On CodePen!

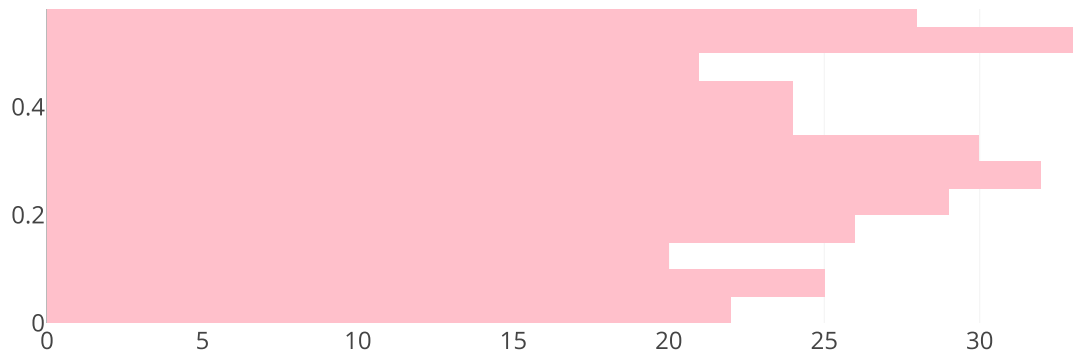




Horizontal Histogram

```
1  var y = [];  
2  for (var i = 0; i < 500; i ++) {  
3      y[i] = Math.random();  
4  }  
5  
6  var data = [  
7      {  
8          y: y,  
9          type: 'histogram',  
10         marker: {  
11             color: 'pink',  
12         },  
13     }  
14 ];  
15 Plotly.newPlot('myDiv', data);  
16
```

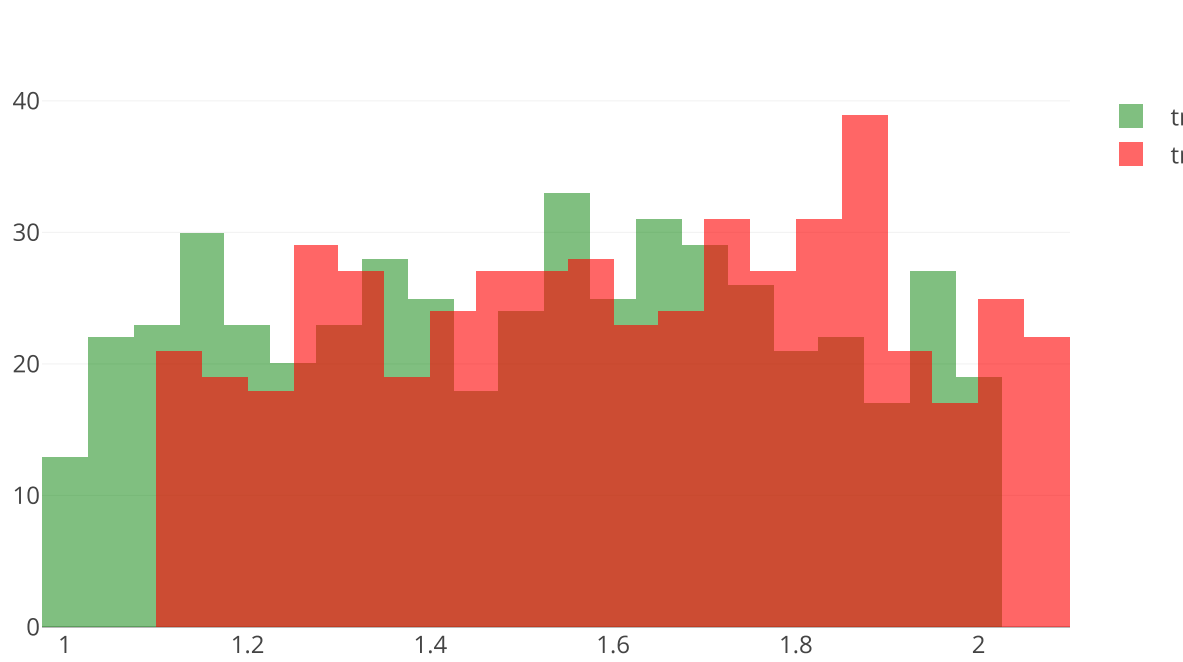
[Try It On CodePen!](#)



Overlaid Histogram

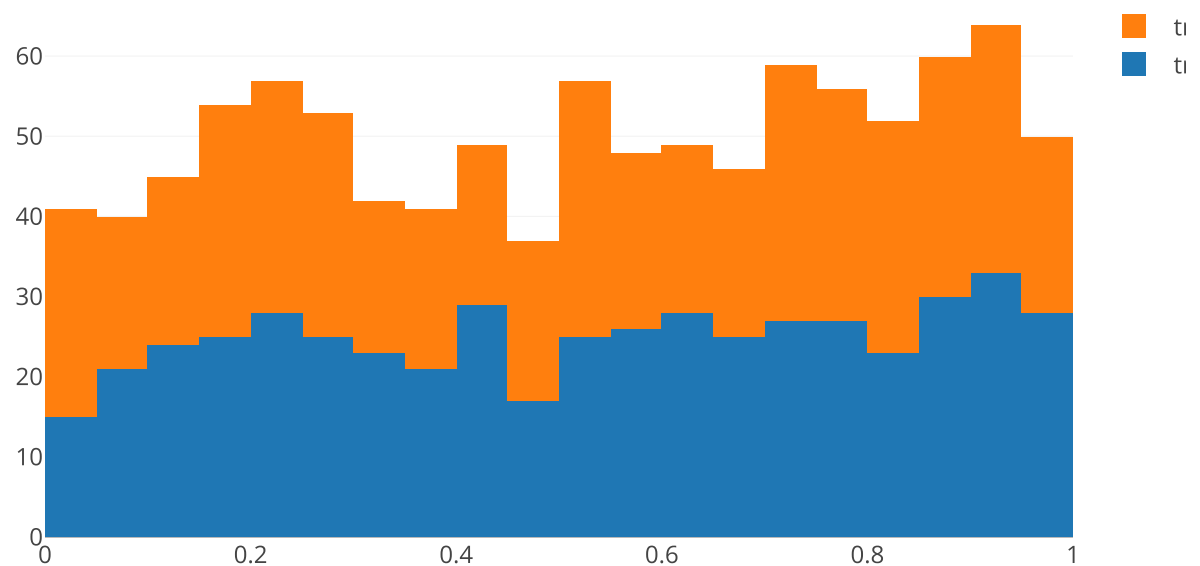
```
1  var x1 = [];  
2  var x2 = [];  
3  for (var i = 1; i < 500; i++)  
4  {  
5      k = Math.random();  
6      x1.push(Math.random() + 1);  
7      x2.push(Math.random() + 1.1);  
8  }  
9  var trace1 = {  
10     x: x1,  
11     type: "histogram",  
12     opacity: 0.5,  
13     marker: {  
14         color: 'green',  
15     },  
16 };  
17 var trace2 = {  
18     x: x2,  
19     type: "histogram",  
20     opacity: 0.6,  
21     marker: {  
22         color: 'red',  
23     },  
24 };  
25  
26 var data = [trace1, trace2];  
27 var layout = {barmode: "overlay"};  
28 Plotly.newPlot('myDiv', data, layout);  
29
```

Try It On CodePen!



Stacked Histograms

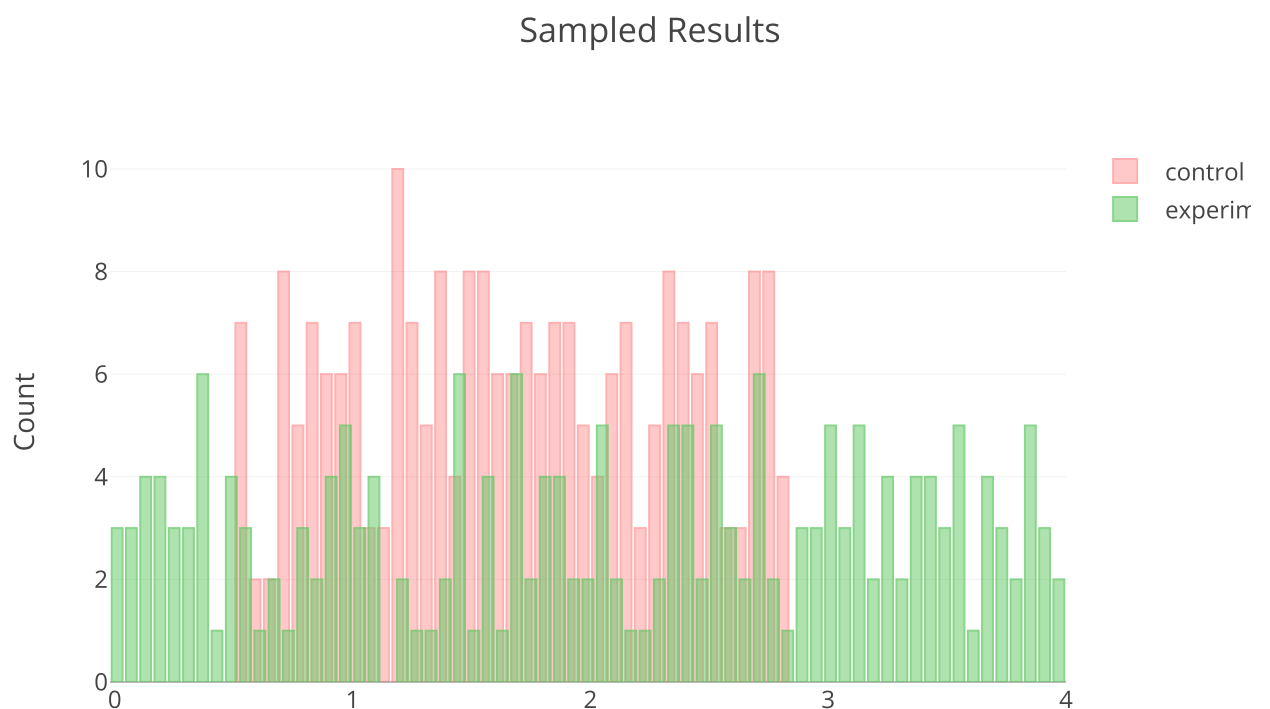
```
1  var x1 = [];  
2  var x2 = [];  
3  for (var i = 0; i < 500; i ++) {  
4      x1[i] = Math.random();  
5      x2[i] = Math.random();  
6  }  
7  
8  var trace1 = {  
9      x: x1,  
10     type: "histogram",  
11 };  
12 var trace2 = {  
13     x: x2,  
14     type: "histogram",  
15 };  
16 var data = [trace1, trace2];  
17 var layout = {barmode: "stack"};  
18 Plotly.newPlot('myDiv', data, layout);  
19
```

[Try It On CodePen!](#)

Colored and Styled Histograms

```
1  var x1 = [];  
2  var x2 = [];  
3  var y1 = [];  
4  var y2 = [];  
5  for (var i = 1; i < 500; i++)  
6  {  
7      k = Math.random();  
8      x1.push(k*5);  
9      x2.push(k*10);  
10     y1.push(k);  
11     y2.push(k*2);  
12 }  
13 var trace1 = {  
14     x: x1,  
15     y: y1,  
16     name: 'control',  
17     autobinx: false,  
18     histnorm: "count",  
19     marker: {  
20         color: "rgba(255, 100, 102, 0.7)",  
21         line: {  
22             color: "rgba(255, 100, 102, 1)",  
23             width: 1  
24         }  
25     },  
26     opacity: 0.5,  
27     type: "histogram",  
28     xbins: {  
29         end: 2.8,  
30         size: 0.06,  
31         start: .5  
32     }  
33 };  
34 var trace2 = {  
35     x: x2,  
36     y: y2,  
37     autobinx: false,  
38     marker: {  
39         color: "rgba(100, 200, 102, 0.7)",  
40         line: {
```

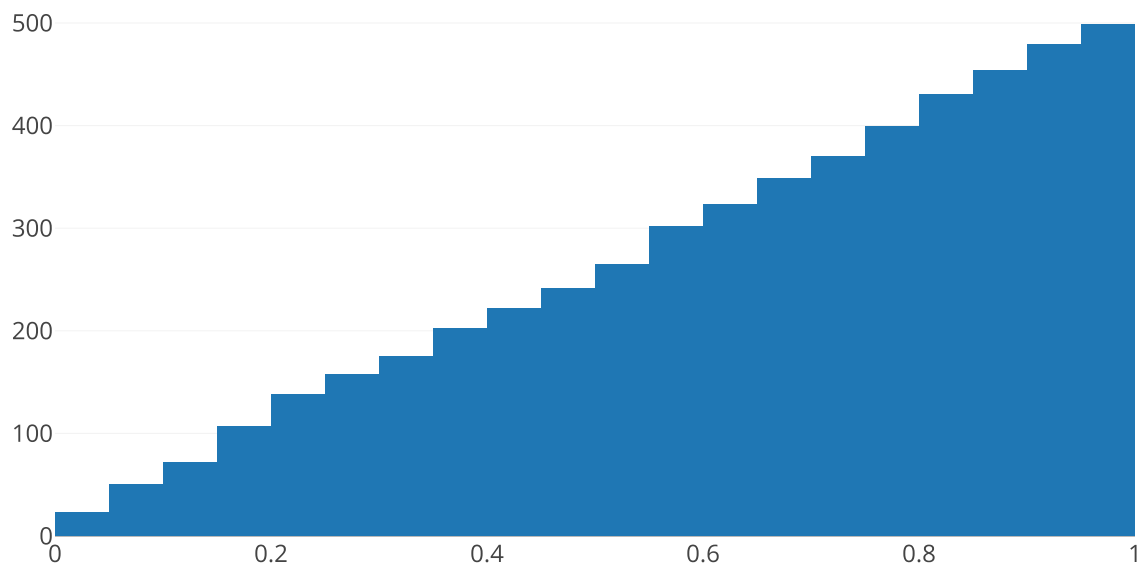
```
41         color: "rgba(100, 200, 102, 1)",
42         width: 1
43     }
44     },
45     name: "experimental",
46     opacity: 0.75,
47     type: "histogram",
48     xbins: {
49         end: 4,
50         size: 0.06,
51         start: -3.2
52     }
53 };
54 };
55 var data = [trace1, trace2];
56 var layout = {
57     bargap: 0.05,
58     bargroupgap: 0.2,
59     barmode: "overlay",
60     title: "Sampled Results",
61     xaxis: {title: "Value"},
62     yaxis: {title: "Count"}
63 };
64 Plotly.newPlot('myDiv', data, layout);
65
```

[Try It On CodePen!](#)

Value

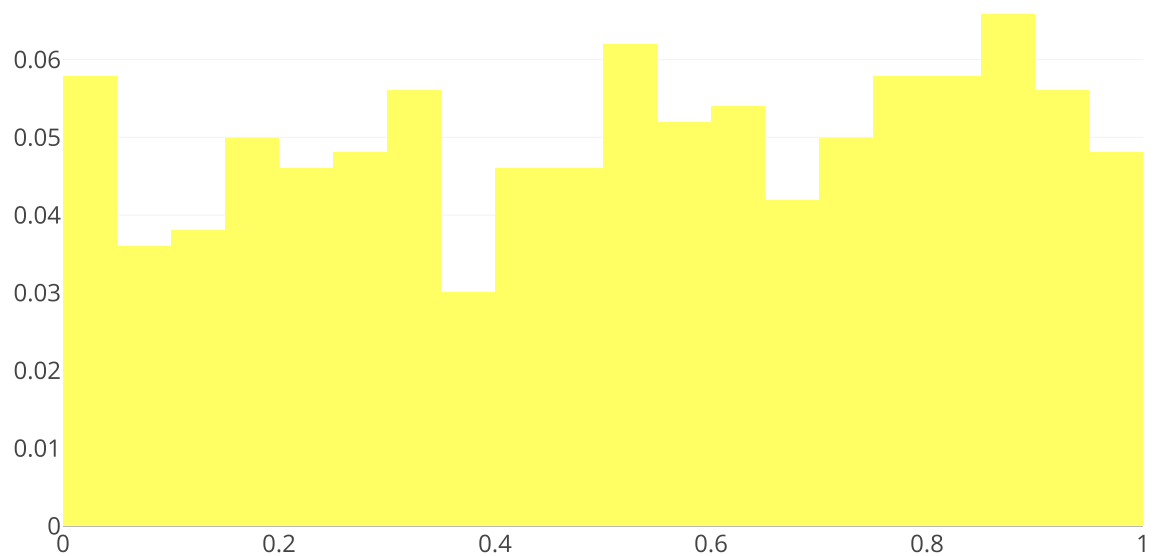
Cumulative Histogram

```
1  var x = [];  
2  for (var i = 0; i < 500; i++) {  
3      x[i] = Math.random();  
4  }  
5  
6  var trace = {  
7      x: x,  
8      type: 'histogram',  
9      cumulative: {enabled: true}  
10 };  
11 var data = [trace];  
12 Plotly.newPlot('myDiv', data);  
13
```

[Try It On CodePen!](#)

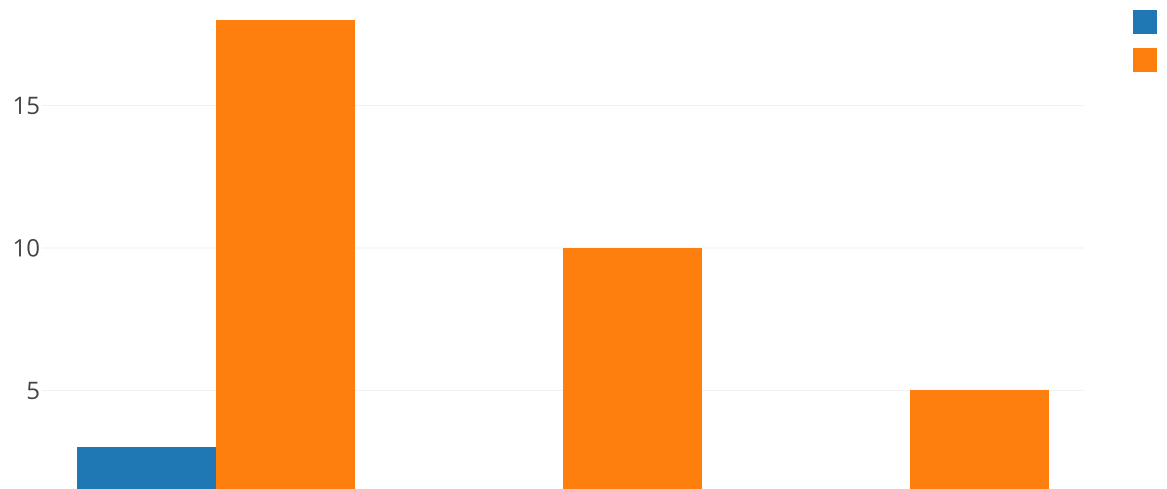
Normalized Histogram

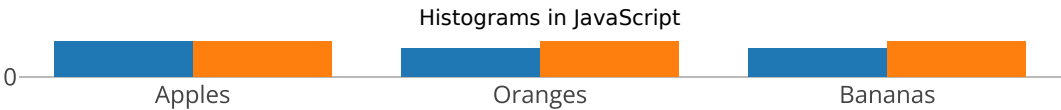
```
1  var x = [];  
2  for (var i = 0; i < 500; i ++) {  
3      x[i] = Math.random();  
4  }  
5  
6  var data = [  
7      {  
8          x: x,  
9          type: 'histogram',  
10         histnorm: 'probability',  
11         marker: {  
12             color: 'rgb(255,255,100)',  
13         },  
14     }  
15 ];  
16 Plotly.newPlot('myDiv', data);  
17
```


[Try It On CodePen!](#)

Specify Binning Function

```
1  var x = ["Apples","Apples","Apples","Oranges", "Bananas"]
2  var y = ["5","10","3","10","5"]
3
4  var data = [
5    {
6      histfunc: "count",
7      y: y,
8      x: x,
9      type: "histogram",
10     name: "count"
11   },
12   {
13     histfunc: "sum",
14     y: y,
15     x: x,
16     type: "histogram",
17     name: "sum"
18   }
19 ]
20
21 Plotly.newPlot('myDiv', data)
22
```

[Try It On CodePen!](#)





Dash your way to interactive web apps.

No JavaScript required!

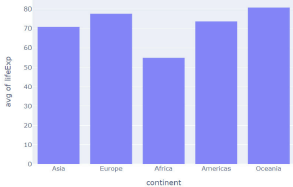
GET STARTED NOW

My First App with Data, Graph, and Controls

☐ pop ☒ lifeExp ☐ gdpPerCap

country	pop	continent	lifeExp	gdpPerCap
Afghanistan	31889921	Asia	43.828	974.1803384
Albania	2600221	Europe	76.423	5937.429525999999
Algeria	33333216	Africa	72.301	6321.367465
Angola	12420476	Africa	42.731	4797.231267
Argentina	40381927	Americas	75.32	12779.37964
Australia	20410176	Oceania	81.235	34435.367439999995
Austria	8199783	Europe	79.829	36126.4927
Bahrain	708573	Asia	75.435	29796.04814
Bangladesh	150448339	Asia	64.062	1391.253792
Belgium	10392226	Europe	79.441	33692.68588
Benin	4070314	Africa	56.728	1441.284873
Bolivia	9119152	Americas	65.554	3822.137084

1 / 12



(https://dash.plotly.com/tutorial?utm_medium=graphing_libraries&utm_content=javascript_footer)

JOIN OUR MAILING LIST

Sign up to stay in the loop with all things Plotly — from Dash Club to product updates, webinars, and more!

SUBSCRIBE
([HTTPS://GO.PLOT.LY/SUBSCRIPTION](https://go.plot.ly/subscription))

Products

Dash (<https://plotly.com/dash/>)
Consulting and Training
(<https://plotly.com/consulting-and-oem/>)

Pricing

Enterprise Pricing
(<https://plotly.com/get-pricing/>)

About Us

Careers
(<https://plotly.com/careers>)
Resources
(<https://plotly.com/resources/>)
Blog
(<https://medium.com/@plotlygraphs>)

Support

Community Support
(<https://community.plot.ly/>)
Documentation
(<https://plotly.com/graphing-libraries>)

Copyright © 2024 Plotly. All rights reserved.

Terms of Service
(<https://community.plotly.com/tos>)

Privacy Policy
(<https://plotly.com/privacy/>)