Difference between plot and scatter matlab

Asked 7 years, 1 month ago Modified 7 years, 1 month ago Viewed 10k times

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Consider the following data points and plots

```
a = randi(50,1,200);
b = randi(50,1,200);
figure;scatter(a,b,'.')
figure;plot(a,b,'.')
```

When we run the following code , we receive exactly the same plots for a against b , my question is why should we even use or to rephrase again in what conditions `scatter` plot has advantage over `plot` function ? because `plot` seem to have more formatting options that the `scatter` function

matlab plot scatter-plot Edit tags

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asked Jul 5, 2016 at 5:59

Novice_Developer
1,432 2 18 33

5 `plot` has a number of formatting options but they are typically suited to data series of the same type, as the formatting will be applied uniformly to all the data points. Also, `plot` joins the dots with a line by default (unless you deactivate the line). `scatter` doesn't join the points by default, and allows you to apply a different formatting for each data point (color, marker shape, etc...). Recommendation: if you do not need to differentiate the data points, use `plot` , if you need to display some points (of the same dataset) differently based on another property, then use `scatter` . – Hoki Jul 5, 2016 at 6:45

@Hoki Thanks for explaining the difference – Novice_Developer Jul 5, 2016 at 15:13

Why a downvote ? did I miss something or didnt I show my own effort ? I just shared my observation and had a confusion or was there something untrue about the statement ? – Novice_Developer Jul 5, 2016 at 15:14

1 Answer

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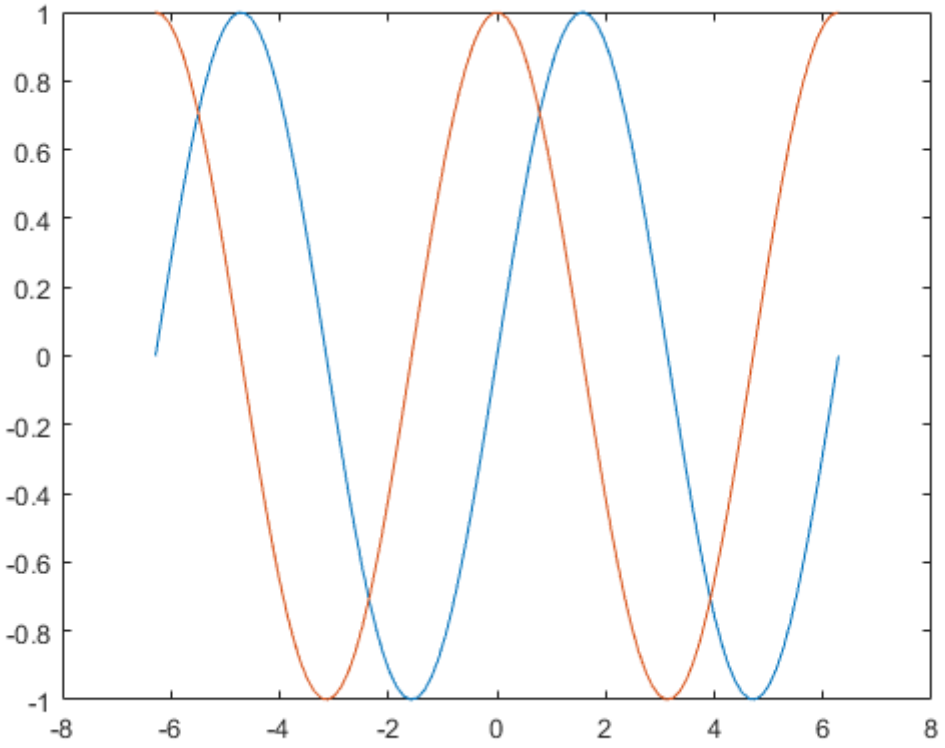
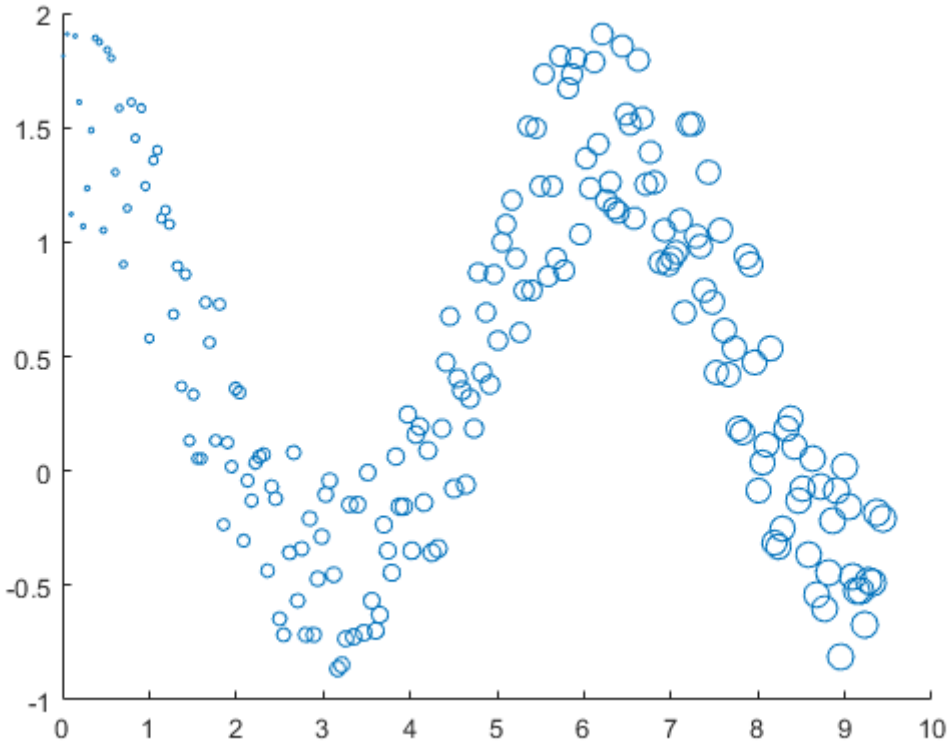
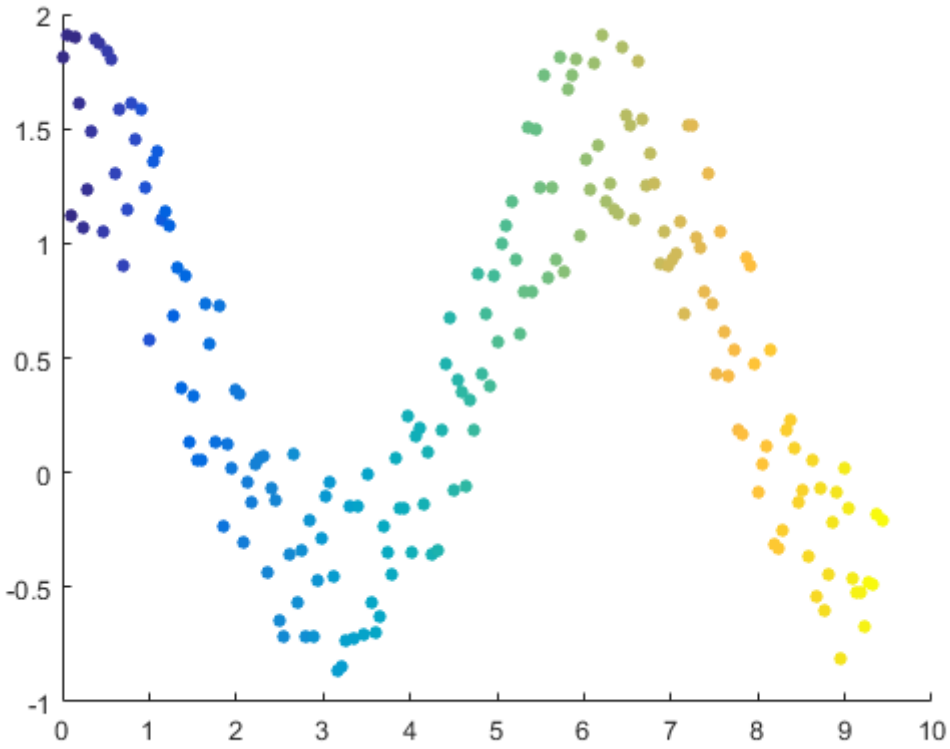
`plot` has a concept of the order of the points mattering so you can use it to make line plots. `plot` also allows you to specify the input `x` and `y` values as either vectors or matrices or allows you to input multiple `x` and `y` vectors both of which allow you to plot multiple series at once:



whereas scatter only allows you to input 1 `x` and 1 `y` and they both have to be vectors. However, 'scatter' allows you to specify an area and colour vector to affect the points individually i.e.





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answered Jul 5, 2016 at 6:36

Dan
45k 17 88 157

1 Could you put the code of each graph? I will be so gratefull! – Ali Rojas Jun 23, 2020 at 3:56

@AliRojas sorry I wrote this 4 years ago. But the code is trivial, look at matplotlib.org/gallery/shapes_and_collections/... for the last two and matplotlib.org/3.2.2/gallery/lines_bars_and_markers/... for the first one – Dan Jun 23, 2020 at 9:39