

How to customize marker colors and shapes in scatter plot? [duplicate]

Asked 6 years, 5 months ago Modified 6 years, 5 months ago Viewed 89k times

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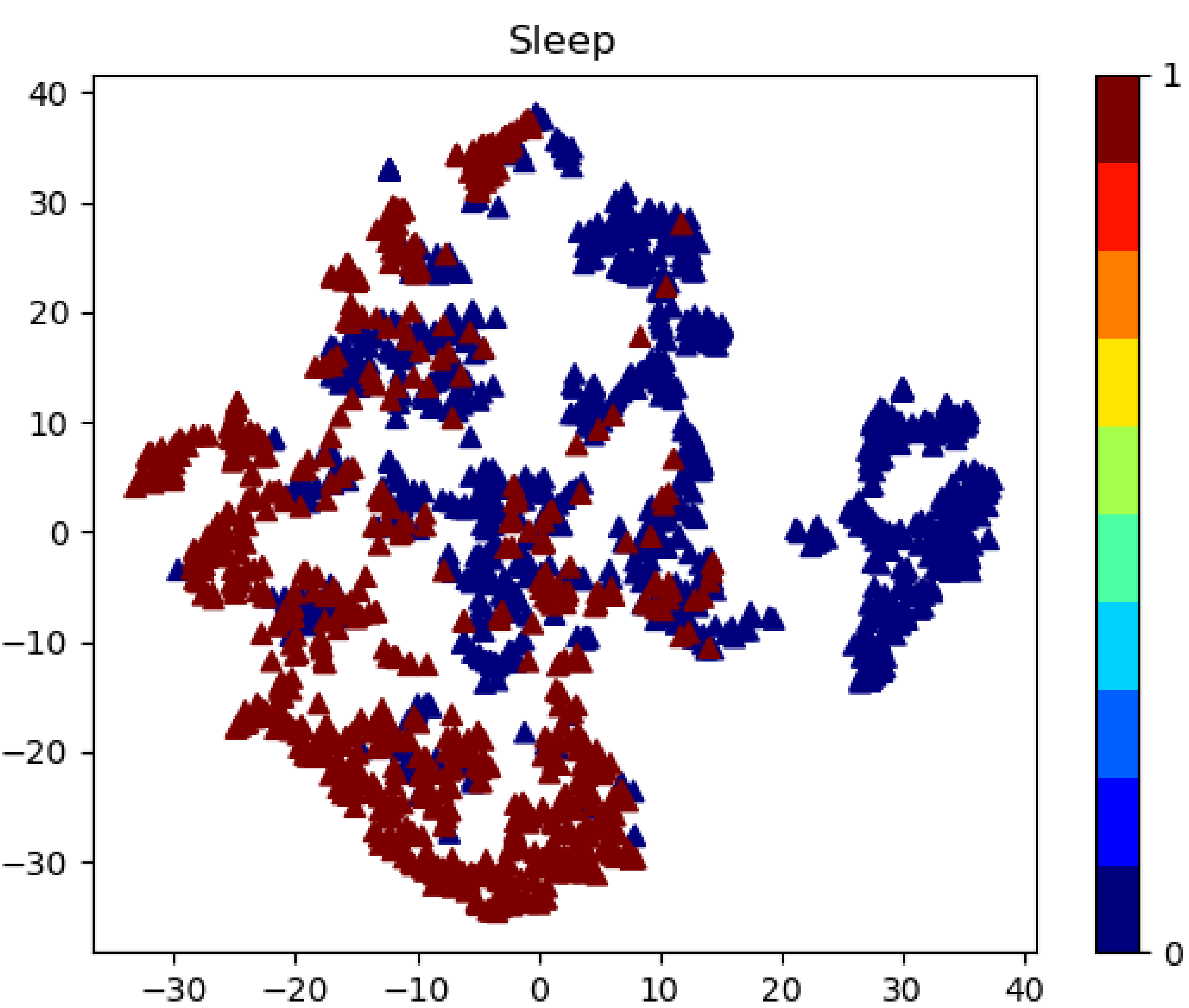
This question already has answers here:
[Scatterplot with different size, marker, and color from pandas dataframe](#) (3 answers)
Closed 2 years ago.

I have a data set with 9 columns. 7 features are used for feature selection and one of them for the classification. I used tsne library for feature selection in order to see how much my data could be classified.The result from tsne is shown in picture.

However, I want to visualize my data in another way. I would like to set a color for each observation based on the column f1 (id). for example :

```
f1(id) f2 f3 ... f9(class label)
1      66 77 ... A
1      44 88 ... A
2      33 55 ... B
2      77 88 ..  B
```

colors come from f1 and shapes come from f9 . I do not know how to do it! I would appreciate for your comments or give me some references to learn more about visualization part.



this is my code:

```
plt.scatter(visualize_x, visualize_y, c= y,marker='^', cmap=plt.cm.get_cmap("jet", 16))
```

python matplotlib scatter-plot markers

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edited Dec 7, 2017 at 16:20

asked Dec 6, 2017 at 22:37

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Elham

847 3 14 26

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You'll have to explain more. How would you like to color the points? Each one a different color? Or all those with output variable == 1 as one color, and the rest as another? – bnaecker Dec 6, 2017 at 22:44

so the color `c=y`, which contains `0` and `1` s? that's why you see only the colors at the top and bottom of your color bar. – innisfree Dec 6, 2017 at 22:44

Which values of visualize_x and visualize_y correspond to each of the 7 features? You would like to see a scatter plot with 7 colors, one for each feature, right? A preliminary problem is then to get the x and y values associated with a given color – kevinkayaks Dec 6, 2017 at 22:46

@bnaecker I would like to have a different colors for different observation but using a shape to label them for example the first person have a color red and belongs to the class 1 with represents by + .I hope that would be clear – Elham Dec 6, 2017 at 22:49

@AlterNative OK, it sounds like you want the color of the point to represent the observation (so each point a different color), and the marker style to represent the class. Is that right? – bnaecker Dec 6, 2017 at 22:52
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1 Answer

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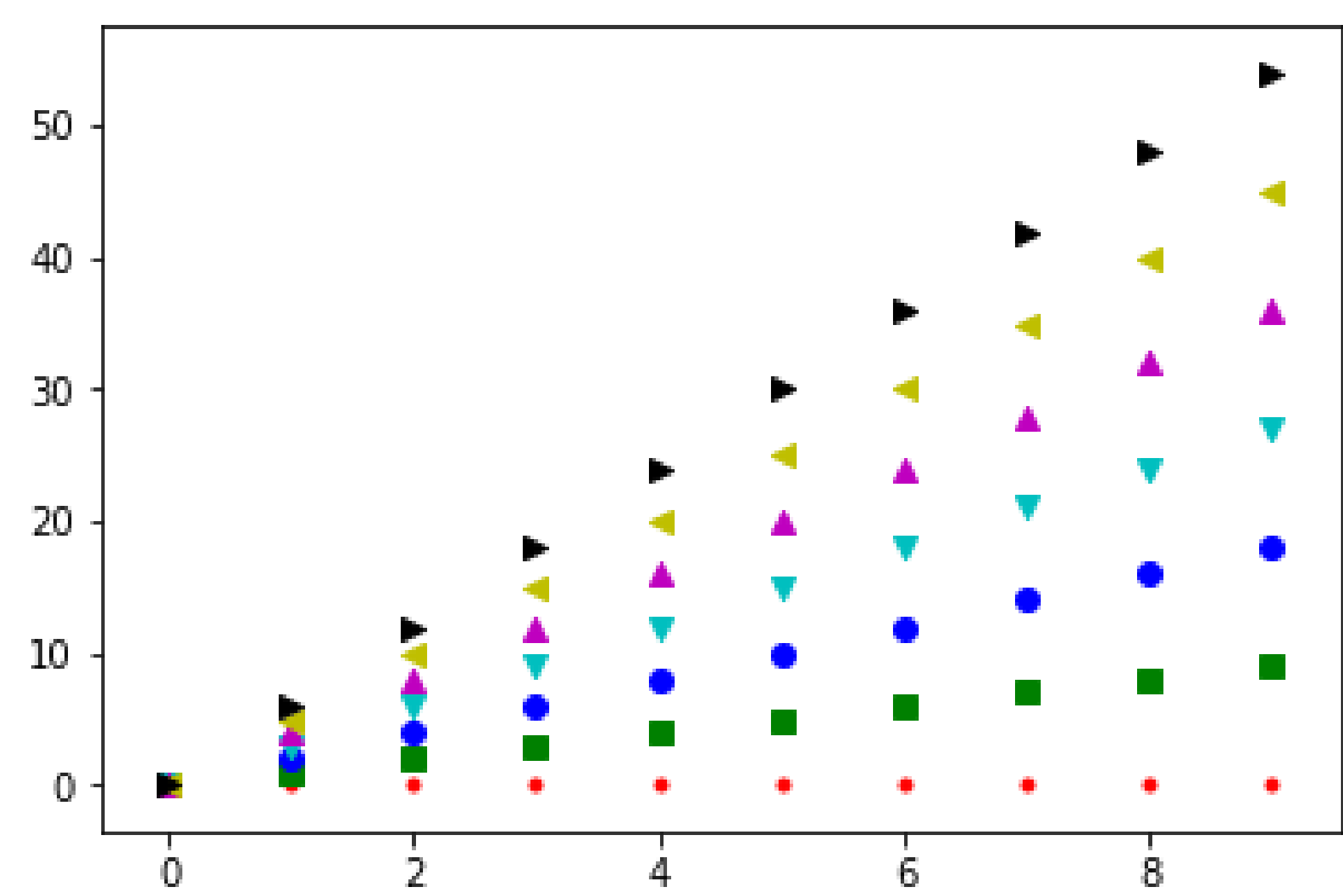
Is this the type of thing you're after?

```
from matplotlib import pyplot as plt

#generate a list of markers and another of colors
markers = [".", "v", "o", "v", "v", "v", "v"]
colors = ['r','g','b','c','m', 'y', 'k']

#make a sample dataset
x = np.arange(0,10) #test x values.. every feature gets the same x values but you ca
y = [s*x for s in np.arange(7)] #generate 7 arrays of y values

for i in range(7): #for each of the 7 features
    mi = markers[i] #marker for ith feature
    xi = x #x array for ith feature .. here is where you would generalize
    yi = y[i] #y array for ith feature
    ci = colors[i] #color for ith feature
    plt.scatter(xi,yi,marker=mi, color=ci)
plt.show()
```



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edited Dec 6, 2017 at 23:33

answered Dec 6, 2017 at 23:09

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kevinkayaks

2,686 1 15 30

- 2

I think it's safe to say with that vague reply I can't attempt to help you further at all. What do you need? – kevinkayaks Dec 6, 2017 at 23:26

2

I understand you have seven categories, each with some set of (x,y,c) where x,y are coordinates in the plane and c is 0 or 1 Then you wanted different colors and markers for each category. Or do you want different markers for each category and different colors for each c? – kevinkayaks Dec 6, 2017 at 23:32

@bnaecker Sorry for confusion. the colors belong to each group of the same id from my dataset and each shapes belong to the class. – Elham Dec 6, 2017 at 23:36

class as in 0 or 1 ? You have 7 groups and two classes per group? – kevinkayaks Dec 6, 2017 at 23:37

1

so construct lists of the appropriate points x,y corresponding to each marker and color combination. Then, loop over the number of marker/color combinations, using the appropriate x,y,marker, and color values for each call in plt.scatter(). The matplotlib structure you need is indicated above – kevinkayaks Dec 8, 2017 at 1:12
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