FREE eBook

LEARNING seaborn

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#seaborn

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About

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Chapter 1: Getting started with seaborn

Remarks

This section provides an overview of what seaborn is, and why a developer might want to use it.

It should also mention any large subjects within seaborn, and link out to the related topics. Since the Documentation for seaborn is new, you may need to create initial versions of those related topics.

Examples

Installation or Setup

Detailed instructions on getting seaborn set up or installed.

Read Getting started with seaborn online: https://riptutorial.com/seaborn/topic/5307/getting-started-with-seaborn

Chapter 2: Barplot

Examples

Barplot with Gradient

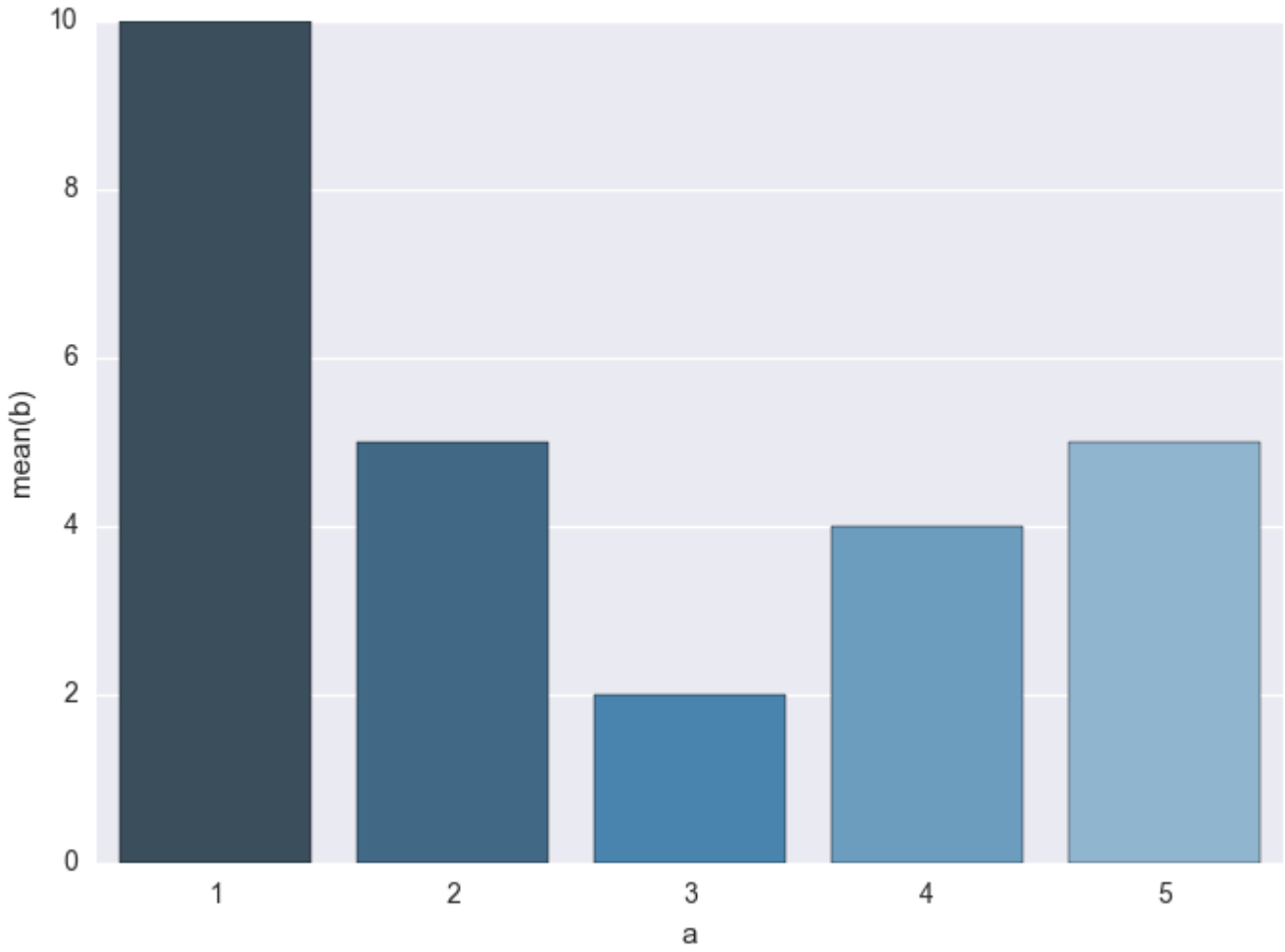
Imagine you have a simple dataframe to plot on a barplot like:

```
df = pd.DataFrame({'a':[1,2,3,4,5], 'b':[10,5,2,4,5]})
```

using seaborn:

```
sns.barplot(df['a'], df['b'], palette='Blues_d')
```

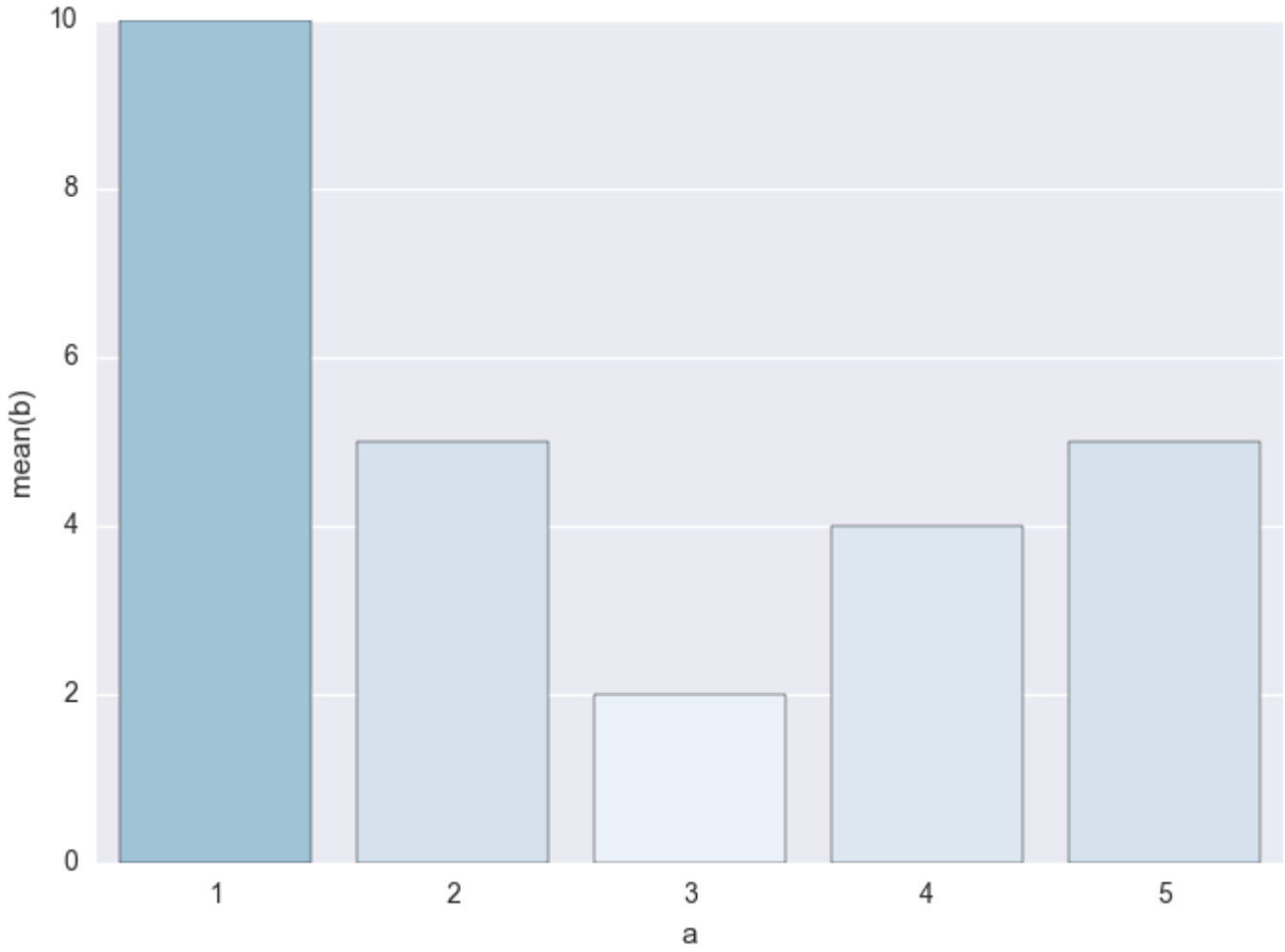
you can obtain something like:



then you can also play with the `palette` option and `colormap` adding a gradient according to some data like:

```
sns.barplot(df['a'], df['b'], palette=cm.Blues(df['b']*10)
```

obtaining:



Read Barplot online: https://riptutorial.com/seaborn/topic/6090/barplot

Chapter 3: Correlation plot

Introduction

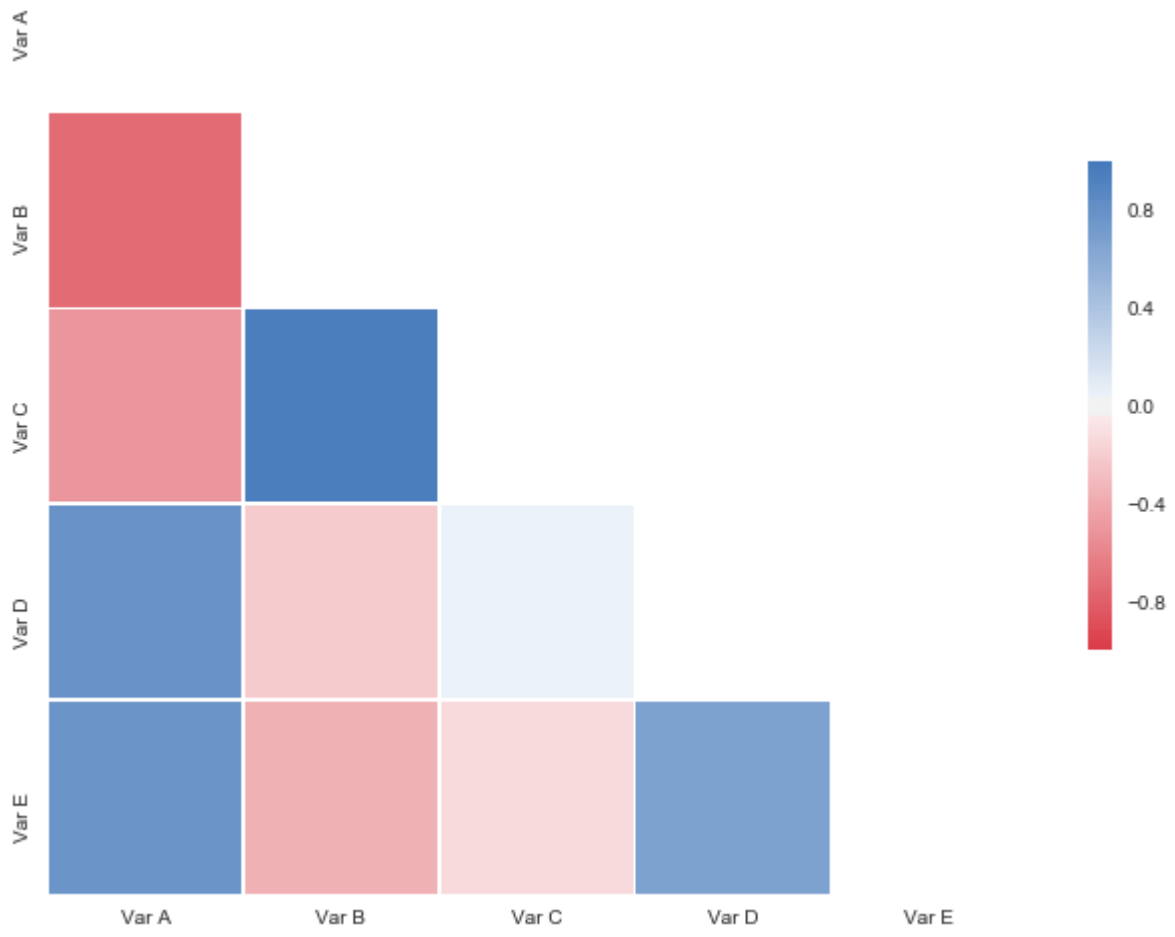
A correlation plot can be regarded as a subcategory of heatmaps. An out-of-the box seaborn heatmap shows the correlation between two variables twice. A correlation plot should handle duplicated values by masking parts of the map, and / or let the masked part show values instead of colors. A bar chart should also be included.

Examples

Basic correlation plot

A basic but illustrative heatmap showing correlations between a number of variables.

```
import pandas as pd
import seaborn as sns
import numpy as np

# Sample dataframe with date index and five variables
np.random.seed(123)
df = pd.DataFrame(np.random.uniform(-0.25,0.25,size=(5, 5)),
              columns = ['Var A','Var B','Var C', 'Var D', 'Var E'])
df['Dates'] =  pd.date_range(start = None, end = pd.datetime.today().strftime('%Y-%m-%d'),
                     periods=5).tolist()
df = df.set_index(['Dates'])

# Compute correlations
corr = df.corr()

# Exclude duplicate correlations by masking uper right values
mask = np.zeros_like(corr, dtype=np.bool)
mask[np.triu_indices_from(mask)] = True

# Set background color / chart style
sns.set_style(style = 'white')

# Set up  matplotlib figure
f, ax = plt.subplots(figsize=(11, 9))

# Add diverging colormap
cmap = sns.diverging_palette(10, 250, as_cmap=True)

# Draw correlation plot
sns.heatmap(corr, mask=mask, cmap=cmap,
        square=True,
        linewidths=.5, cbar_kws={"shrink": .5}, ax=ax)
```



Possible improvements:

1. Remove redundant labels on y-axis (Var A) and x-axis (Var E)
2. Add correlations (values) either in lower left or upper right part of the map

Read Correlation plot online: https://riptutorial.com/seaborn/topic/10634/correlation-plot

Credits

S. No	Chapters	Contributors
1	Getting started with seaborn	Community
2	Barplot	Fabio Lamanna
3	Correlation plot	vestland