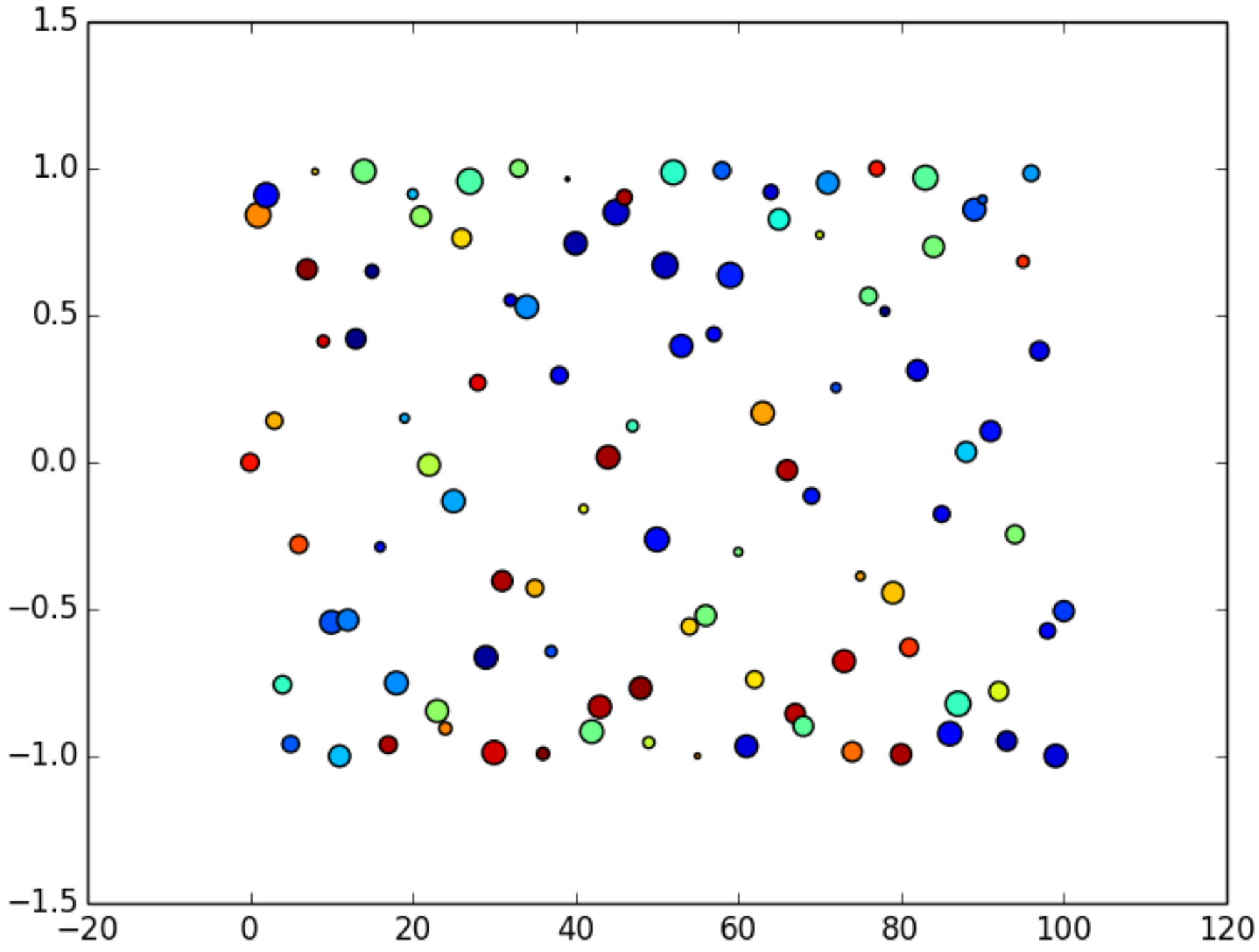
INF100 – 12

CSV, matplotlib

Crystal Chang Din
David Grellscheid

matplotlib



matplotlib

https://matplotlib.org/

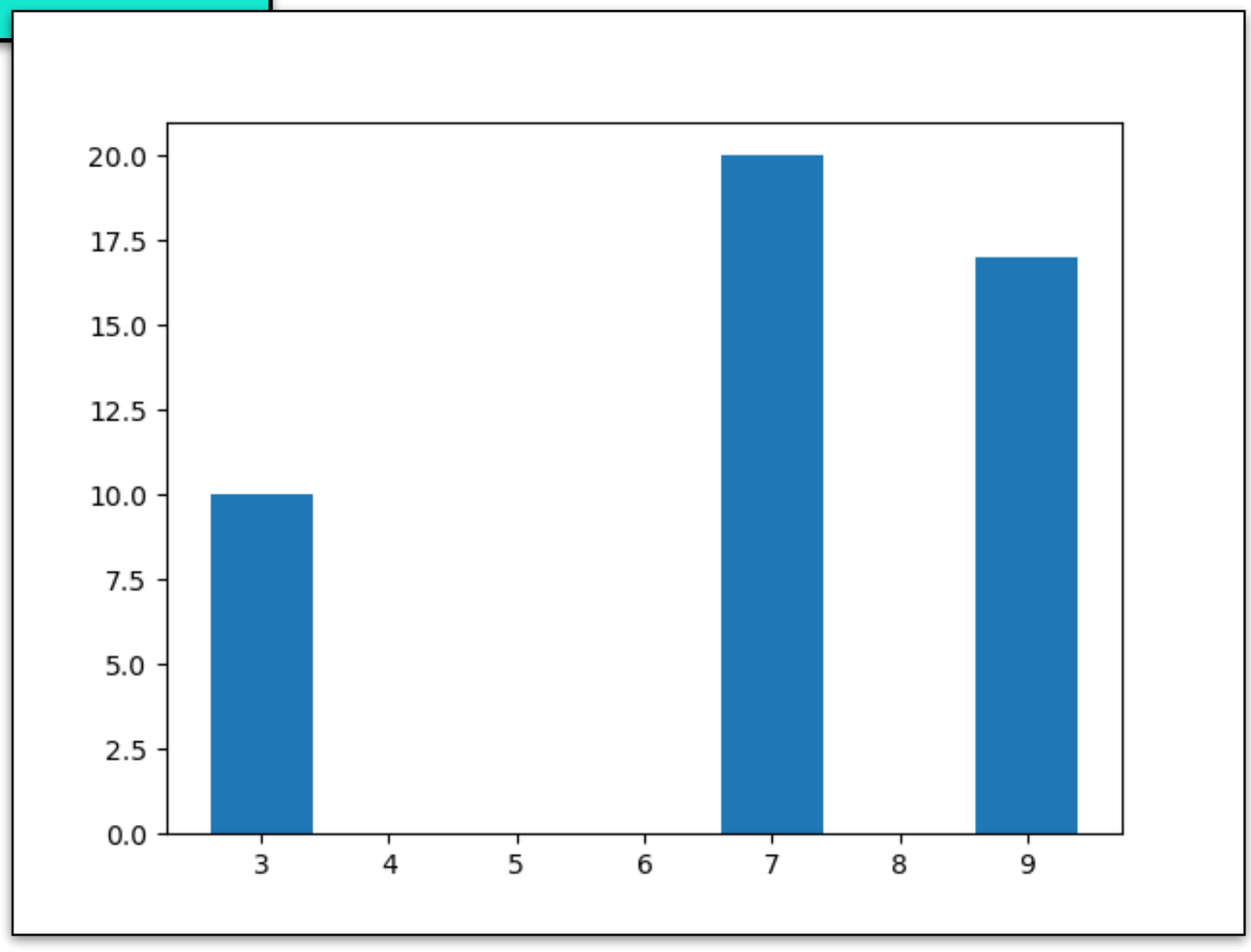
- eksternt bibliotek, ikke en del av standard-Python
- For å installere **matplotlib** og **numpy** kan du laste ned *install.py* fra oppgaven uke 12 og kjøre filen. Vi skal bruke **numpy** neste uke.

```
import matplotlib.pyplot as plt
```

matplotlib bar chart

```
import matplotlib.pyplot as plt

plt.bar([3, 7, 9], [10, 20, 17])
plt.show()
```



pyplot tutorial

https://matplotlib.org/stable/tutorials/introductory/pyplot.html

```
import matplotlib.pyplot as plt
```

Pyplot tutorial

An introduction to the pyplot interface.

Intro to pyplot

`matplotlib.pyplot` is a collection of functions that make matplotlib work like MATLAB. Each `pyplot` function makes some change to a figure: e.g., creates a figure, creates a plotting area in a figure, plots some lines in a plotting area, decorates the plot with labels, etc.

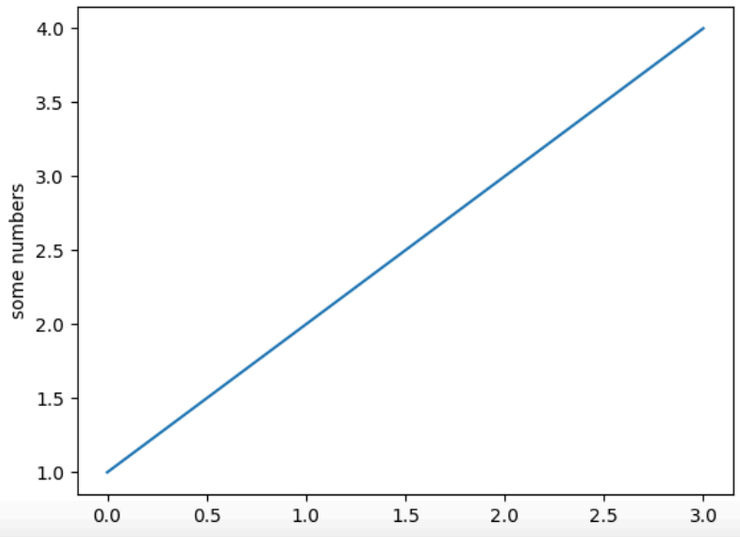
In **`matplotlib.pyplot`** various states are preserved across function calls, so that it keeps track of things like the current figure and plotting area, and the plotting functions are directed to the current axes (please note that "axes" here and in most places in the documentation refers to the *axes* part of a figure and not the strict mathematical term for more than one axis).

Note

the pyplot API is generally less-flexible than the object-oriented API. Most of the function calls you see here can also be called as methods from an `Axes` object. We recommend browsing the tutorials and examples to see how this works.

Generating visualizations with pyplot is very quick:

```
import matplotlib.pyplot as plt
plt.plot([1, 2, 3, 4])
plt.ylabel('some numbers')
plt.show()
```



matplotlib.pyplot

- bar()
- plot()
- title(), xlabel(), ylabel()
- label=… plt.legend()
- axis(), xlim(), ylim()
- subplot()
- show(), savefig()

matplotlib gallery

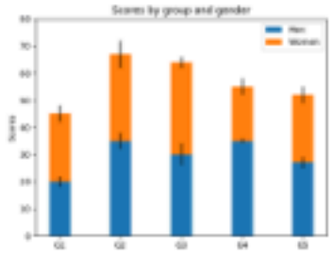
https://matplotlib.org/gallery/index.html

Gallery

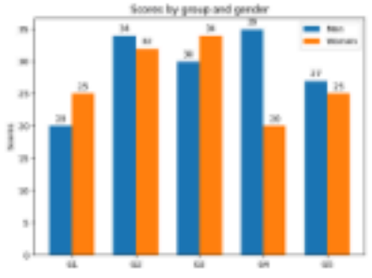
This gallery contains examples of the many things you can do with Matplotlib. Click on any image to see the full image and source code.

For longer tutorials, see our tutorials page. You can also find external resources and a FAQ in our user guide.

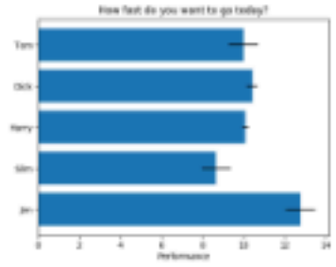
Lines, bars and markers



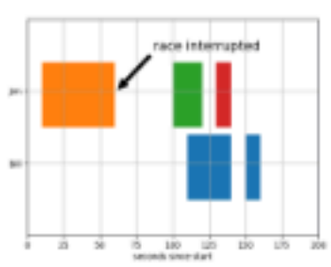
Stacked Bar Graph



Grouped bar chart with labels



Horizontal bar chart



Broken Barh