

# Quarto Document

Boi

## 1 Colors

- Red
- Green
- Blue

## 2 Shapes

- Square
- Circle
- Triangle

## 3 Textures

- Smooth
- Bumpy
- Fuzzy

## 4 Overview

Knuth says always be literate [[@knuth1984](#)].

1 + 1

2

## 5 Overview1

See Figure 1 in Section 6 for a demonstration of a simple plot.

See Equation 1 to better understand standard deviation.

## 6 Plot

```
import matplotlib.pyplot as plt
plt.plot([1,23,2,4])
plt.show()
```

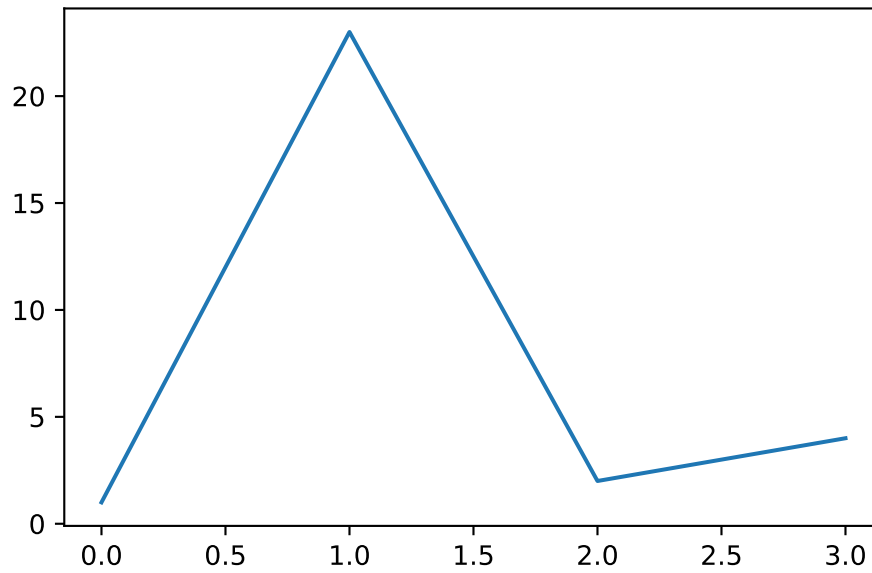


Figure 1: Simple Plot

## 7 Equation

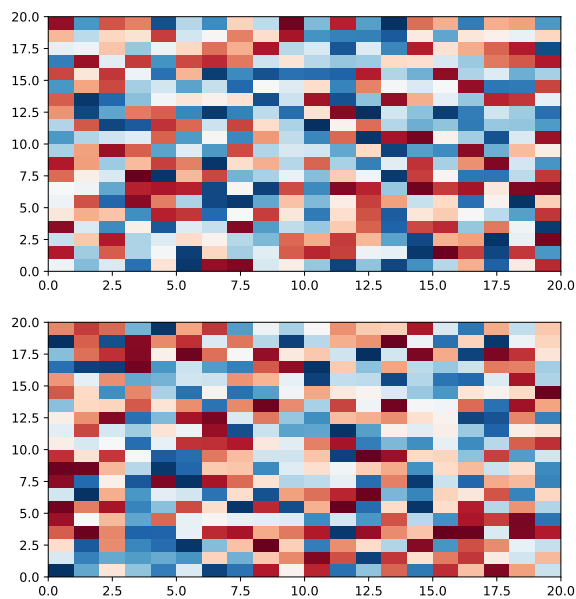
$$s = \sqrt{\frac{1}{N-1} \sum_{i=1}^N (x_i - \bar{x})^2} \quad (1)$$

## 8 Placing Colorbars

Colorbars indicate the quantitative extent of image data. Placing in a figure is non-trivial because room needs to be made for them. The simplest case is just attaching a colorbar to each axes:<sup>1</sup>.

```
import matplotlib.pyplot as plt
import numpy as np

fig, axs = plt.subplots(2, 2)
fig.set_size_inches(20, 8)
cmaps = ['RdBu_r', 'viridis']
for col in range(2):
    for row in range(2):
        ax = axs[row, col]
        pcm = ax.pcolormesh(
            np.random.random((20, 20)) * (col + 1),
            cmap=cmaps[col]
        )
        fig.colorbar(pcm, ax=ax)
plt.show()
```



## 9 References

<sup>1</sup>See the [Matplotlib Gallery](#) to explore colorbars further