Main-Title

Sub-Title

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A tagline for the report.

Institution1
Institution2

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1 Markdown

1.1 General

Some markdown text.

A list:

- something
- something else

A numbered list

1. something
2. something else

1.2 References and Citations

References to fig. 3.1, table 4.1, eq. 5.2 and code 3.1.

Referencing multiple items: figs. 3.1 to 3.3.

A latex citation.[1]

A html citation.[2]

1.3 Todo notes

an inline todo

Some text.

a todo in the margins

2 Text Output

```
This is some printed text,
with a nicely formatted output.
```

3 Images and Figures
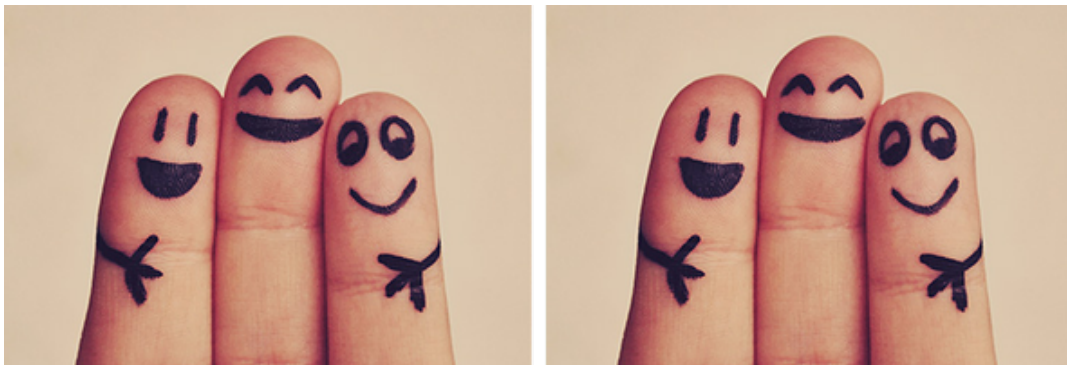

Figure 3.1: A nice picture.
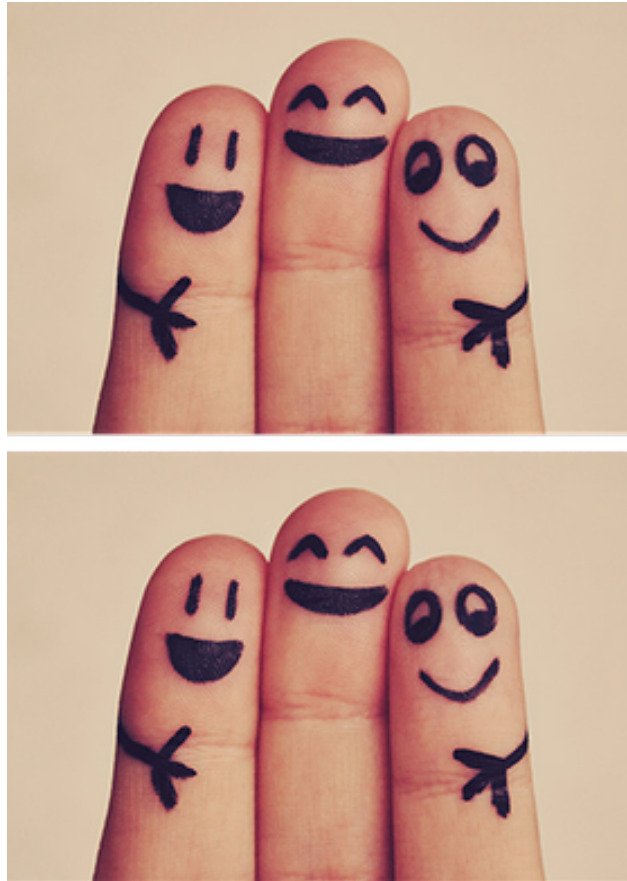

Figure 3.2: Horizontally aligned images.

Figure 3.3: Vertically aligned images.

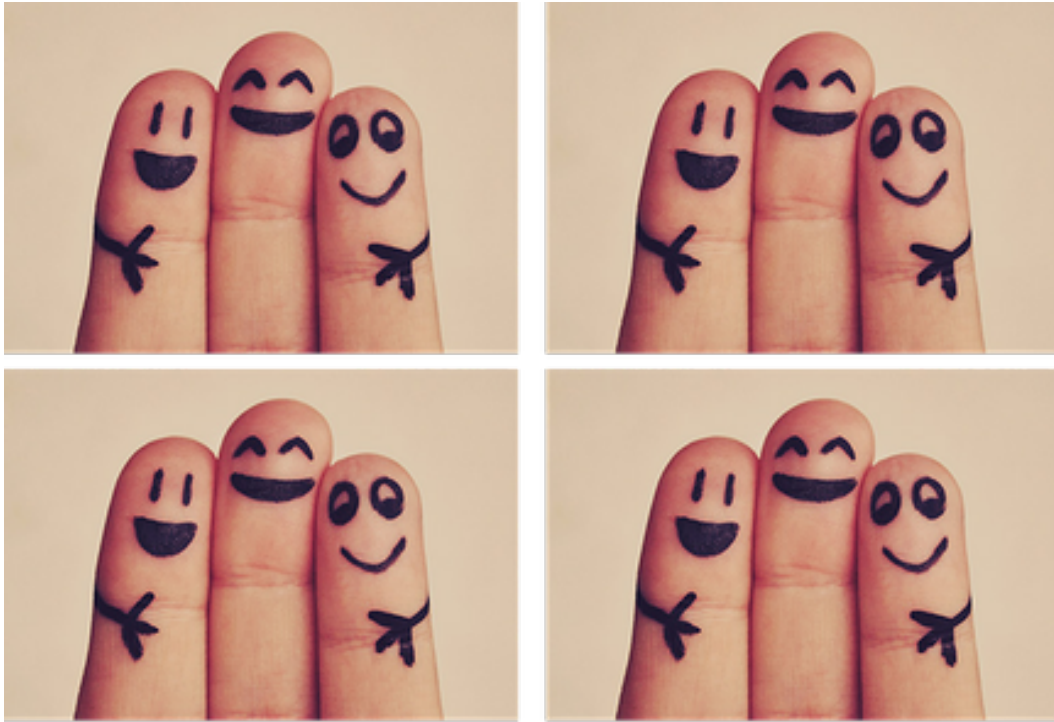*Figure 3.4:* Images aligned in a grid.

3.1 Displaying a plot with its code

Code 3.1: The plotting code for a matplotlib figure (fig. 3.5).

```
1  plt.scatter(np.random.rand(10), np.random.rand(10),
2              label='data label')
3  plt.ylabel(r'a y label with latex $\alpha$')
4  plt.legend();
```
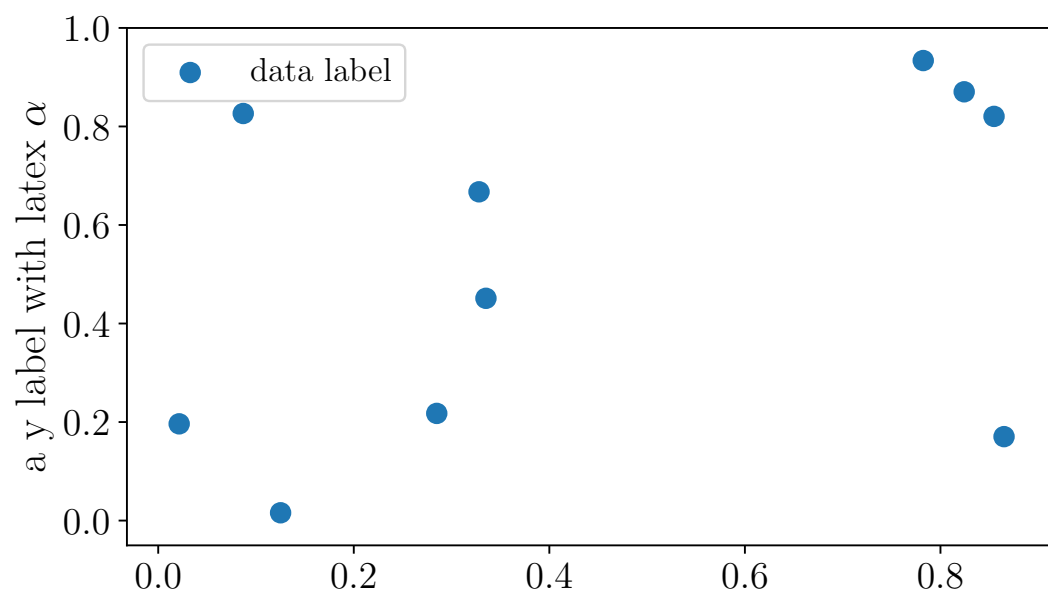
Figure 3.5: A matplotlib figure, with the caption set in the markdowncell above the figure.

4 Tables (with pandas)

Code 4.1: The plotting code for a pandas Dataframe table (table 4.1).

```
1  df = pd.DataFrame(np.random.rand(3,4),columns=['a','b','c','d'])
2  df.a = ['$\delta$','x','y']
3  df.b = ['l','m','n']
4  df.set_index(['a','b'])
5  df.round(3)
```

Table 4.1: An example of a table created with pandas dataframe.

	a	b	c	d
0	δ	l	0.583	0.279
1	x	m	0.914	0.021
2	y	n	0.333	0.116

5 Equations (with ipython or sympy)

$$a = b + c \tag{5.1}$$

Code 5.1: The plotting code for a sympy equation (eq. 5.2).

```
1  f = sym.Function('f')
2  y,n = sym.symbols(r'y \alpha')
3  f = y(n)-2*y(n-1/sym.pi)-5*y(n-2)
4  sym.rsolve(f,y(n),[1,4])
```

$$\left(\sqrt{5}i\right)^{\alpha}\left(\frac{1}{2} - \frac{2i}{5}\sqrt{5}\right) + \left(-\sqrt{5}i\right)^{\alpha}\left(\frac{1}{2} + \frac{2i}{5}\sqrt{5}\right) \tag{5.2}$$

6 Embedded HTML

HTML was created using ipyvolume and will render below in .html type outputs:

7 References

[1] T. Yu Zelenyak, Kh T. Kholmurodov, A. R. Tameev, A. V. Vannikov, and P. P. Gladyshev. Molecular dynamics study of perovskite structures with modified interatomic interaction potentials. 50(5): 400–405. ISSN 0018-1439, 1608-3148. doi:10.1134/S0018143916050209.

[2] Alec Kirkeminde and Shenqiang Ren. Thermodynamic control of iron pyrite nanocrystal synthesis with high photoactivity and stability. 1(1):49–54. ISSN 2050-7496. doi:10.1039/C2TA00498D.