Inf2 – Foundations of Data Science: Font size demo

The paper size is A4, 297mm (11.69in) high and 210mm (8.27in) wide. The margins are 1in wide.

This box is specified to be 6in wide and 4in high, the default size of figure in Matplotlib.

This text is written with a font size of 10 points (10pt), the default font size in Matplotlib.

Below each box is 10 points high by 10 points wide and is big enough to contain a character in a 10pt font size. “M” is shown as its the widest capital letter.

MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM

A point is defined as 1/72 of an inch, so we would expect 6/(10/72)=43 characters to fit in a line 6 inches wide.

43 10pt characters do indeed fit in a 6in wide line (the numbers should help us to count)

1234567890123456789012345678901234567890123

Suppose we’re having problems squeezing text into the plot, so we want to make the font smaller to fit more characters in a line. Journals (e.g. PLOS, American Psychology Association) typically suggest a minimum font size around 8pt, which is a bit smaller than the font used in the main text.

This text is in 9pt. 48 9pt characters fit in a line 6in wide

123456789012345678901234567890123456789012345678

This text is in 8pt. 54 8pt characters fit in a line 6in wide.

123456789012345678901234567890123456789012345678901234

The box below was specified to be 12in wide and 8in high, to simulate making a figure with `figsize=(12,8)` in Matplotlib, a common strategy to make text fit into a crowded figure. When included in the document, the figure has been scaled to be 6in wide and 4in high, so it’s shrunk by a factor of two.

This text is written with a font size of 10 points (10pt), the default font size in Matplotlib. But here it’s effectively 5pt, because of the shrinkage due to including the document.

A point is defined as 1/72 of an inch, so we would expect 12/(10/72)=86 characters to fit in a line 12 inches wide.

86 10pt characters did indeed fit in a 12in wide line (the numbers should help us to count). Yay! We can fit we more characters in. But can we read them, now that they are effectively 5pt?

12345678901234567890123456789012345678901234567890123456789012345678901234567890123456

This text is in 9pt. 96 9pt characters fit in a line 12in wide. But it’s actually 48 4.5pt characters in 6in.

123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456

This text is in 8pt. 108 8pt characters fit in a line 12in wide. But due to the shrinkage, it’s actually 108 4pt characters fit in a line 6in wide.

123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678