

Template in TeX

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1 This is a big heading

Notice I made a table of contents above, this can be useful. It can also be useful to write comments to yourself in the source code, use the % sign to do that. That means the percent sign is special and needs to be written special in TeX, that's a common error.

1.1 And this is a sub heading

You can make a list:

- first let's learn some easy math stuff

Maybe you have the most brilliant simple equation

$$E = mc^2 \tag{1}$$

or maybe you need 2 lines

$$\begin{aligned}\frac{\partial x}{\partial t} &= \dot{x} = \frac{\Delta x}{\Delta t} = v \\ v &= \sqrt{2E/m}\end{aligned}\tag{2}$$

maybe it's not a super important equation, and thus doesn't need to be numbered

$$F = ma$$

and if you want a matrix, like an $m \times n$ matrix \mathcal{M} ?

$$\mathcal{M} = \begin{bmatrix} x_{11} & x_{12} & x_{13} & \dots & x_{1n} \\ x_{21} & x_{22} & x_{23} & \dots & x_{2n} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ x_{m1} & x_{m2} & x_{m3} & \dots & x_{mn} \end{bmatrix}$$

If you want to denote code, typically you might write: I used `ode15` in Matlab.

I like to make **vectors** bold, e.g. $\mathbf{v} = a\hat{x} + b\hat{y}$, and sometimes greek letters need to be bolded as well $\boldsymbol{\xi}$

1.2 Bibliography stuff

I often use the `hyperref` package so that I can color my citations and make them clickable, for example Ref. [\[1\]](#), has been essential to my immunology learning. Note the tilde in the source document it makes the spacing correct.

Using `.bib` files is awesome, so you can look into that as well.

2 Going nuts with Tikz

You can go crazy making pictures in TeX too, and reference them like this: in Fig. 1, we see some crazy shit.

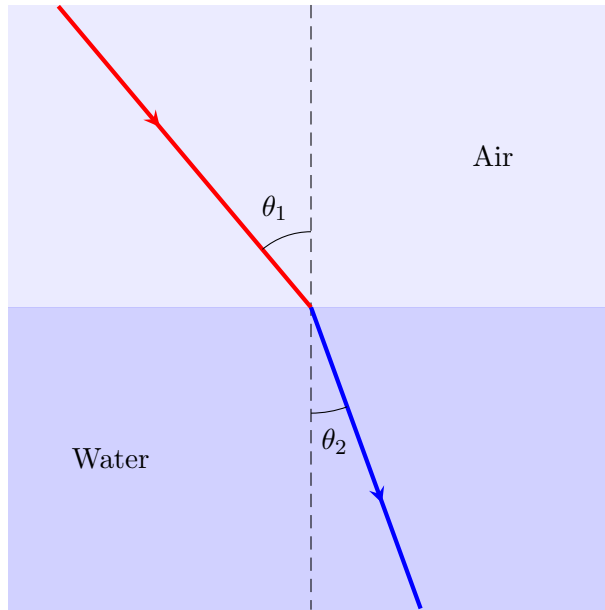


Figure 1: This is a tikz figure I stole from the internet. Lol.

References

- [1] Sompayrac, Lauren M. How the immune system works. John Wiley & Sons, 2011.