This will be my article title.

An Intro to LaTeX

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Figure 1: This is the LaTeXlogo.

1 Introduction

You can do all the following without a LaTeXgui using https://www.overleaf.com. For writing one-off equations use LaTeXiT https://www.chachatelier.fr/latexit/. To find a symbol: http://detexify.kirelabs.org/classify.html.

My un-numbered subsection

The fundamental principle of calculus entails

$$\lim_{\Delta x \to 0} \frac{f(a + \Delta x) - f(a)}{\Delta x}. \tag{1}$$

Calculus rocks because it can do all of the following:

- first item

One could also organize all the cools things it can do in a table

Reason	Explanation
1	blah blah blah

I can easily reference the section (sect.1), equation (eqn. 1) and table (Table 1). Their numbers will auto-generate, which makes it easy to move them around in your paper and adhere to a journal's stylistic preferences.

2 Figures

Note that the position of figures is auto-determined!

3 Some other stuff

Here are a few sketches for equations that might come in handy.

Differential equations

The Lotka-Voltera equations are given by

$$\frac{dx}{dt} = \alpha x - \beta xy \tag{2}$$

$$\frac{dy}{dt} = \gamma xy - \delta y \tag{3}$$

These can be written "inline" using (for example): $\dot{x} = \alpha x - \beta xy$ etc.

Derivations

It is nice to typeset the steps of derivations. Pay it forward to folks who are trying to learn these methods, and to yourself when you can't remember the details but have to lecture on it in 5 minutes.

$$\begin{aligned} N(10) &= \lambda N(9) \\ &= \lambda^2 N(8) \\ &= \lambda^3 N(7) \\ &\dots \\ &= \lambda^{10} N(0) \end{aligned} \tag{4}$$