

L^AT_EX PROJECT MANAGEMENT

A consistent boilerplate for L^AT_EX projects, I choose AOS for regular articles, please check <https://vtex-soft.github.io/textsupport.ims-aos/> for more details

The references are managed externally by Zotero and BBT, exported to BibTeX format, then included via `natbib`.

1. Project Structure.

1.1. *Shared Files.* For example, I would like to have AOS template as the default but do not wish to include the `.cls` in each folder. This can be achieved locally when writing in Texifier. Most importantly, I can now sourced my `macro.tex` anywhere.

Ideally, my bib should also be centralized.

1.2. *Single File Project.* This is the default with one-file project, easy to track.

```

|— fig
|   |— plots.pdf
|— main.bib
|— main.tex
|— main.pdf
|— marco.tex                % All my collected macros
|— custom-style.cls/def/sty/bst

```

1.3. *Multi-Files Project.* Below is a larger L^AT_EX with different chapters:

```

|— chapters
|   |— 01-blabla.tex
|— fig
|   |— R/Python.pdf
|   |— TikZ.tex
|   |— TikZ.pdf
|   |— Asymptote.asy
|   |— Asymptote.pdf
|— main.bib
|— main.tex
|— main.pdf
|— marco.tex                % All my collected macros
|— custom-style.cls/def/sty/bst

```

2. Mathematical Notation. It has always been a hassle to organise mathematical notation across different sources, in fact, I would go so far as to argue that it is the most annoying thing when one starts reading a book or an article.

However, there *must be* some notational conflicts beyond primary school simply due to the fact that the limited number of alphabets (**26**). For example, “ \mathbb{E} ” might be energy in physics while it could refer to expectation or scores in probability.

Another difficulty is that the authors often assume some familiarity in the topics *also* I am expected to read in some logical or chronological order. In reality, I am constantly jumping back and forth between one literature to another.

A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
 $\mathcal{A}, \mathcal{B}, \mathcal{C}, \mathcal{D}, \mathcal{E}, \mathcal{F}, \mathcal{G}, \mathcal{H}, \mathcal{I}, \mathcal{J}, \mathcal{K}, \mathcal{L}, \mathcal{M}, \mathcal{N}, \mathcal{O}, \mathcal{P}, \mathcal{Q}, \mathcal{R}, \mathcal{S}, \mathcal{T}, \mathcal{U}, \mathcal{V}, \mathcal{W}, \mathcal{X}, \mathcal{Y}, \mathcal{Z}$
 $\mathfrak{A}, \mathfrak{B}, \mathfrak{C}, \mathfrak{D}, \mathfrak{E}, \mathfrak{F}, \mathfrak{G}, \mathfrak{H}, \mathfrak{I}, \mathfrak{J}, \mathfrak{K}, \mathfrak{L}, \mathfrak{M}, \mathfrak{N}, \mathfrak{O}, \mathfrak{P}, \mathfrak{Q}, \mathfrak{R}, \mathfrak{S}, \mathfrak{T}, \mathfrak{U}, \mathfrak{V}, \mathfrak{W}, \mathfrak{X}, \mathfrak{Y}, \mathfrak{Z}$

$\arg \inf, \arg \sup, \arg \max, \arg \min, \operatorname{conv}$

This stackexchange answer: <https://tex.stackexchange.com/a/58124> is probably the most comprehensive answer to which fonts are shown in \LaTeX .

Symbol	Usage	Comments
\mathbb{B}	<code>*f</code>	blackboard bold except <code>\If</code> due to conflict
\mathcal{B}	<code>*c</code>	calligraphic font
\mathfrak{B}	<code>*k</code>	Fraktur font

2.1. *Choose the Right Notation and Shortcuts.* I am not even talking about the difference due to differences in fonts and italic or roman. It is just a very sad thing that we don't even have a unified way of saying probability is just sad. Take probability for example and return to the most basic case of tossing a coin where the sample space is $\mathcal{A} = \{H, T\}$. I have come across:

$P()$ $\mathbb{P}()$ $\Pr()$ $\mathbb{P}()$ **Prob()**.