

# L<sup>A</sup>T<sub>E</sub>X with Overleaf

A tutorial on typesetting for publication with LangSci Press

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# Outline

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L<sup>A</sup>T<sub>E</sub>X101

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# Acknowledgements

- ▶ Land: *‘I wish to acknowledge and honor the indigenous communities native to these lands and recognize that the University of Texas was built on indigenous homelands and resources. I recognize the Apache, the Alabama-Coushatta Tribe of Texas, the Kickapoo Tribe of Texas, the Ysleta del sur Pueblo, the Lipan Apache Tribe, the Texas Band of Yaqui Indians, and the Coahuitlecan as past, present and future caretakers of this land’*
- ▶ The organizers of the LSRL@50 for the invitation to facilitate this workshop.
- ▶ The following slides are an abridged version adapted from Dr. Lees-Miller ‘An Interactive Introduction to L<sup>A</sup>T<sub>E</sub>X’

## Setting up an Overleaf account

- ▶ Visit the Overleaf site
- ▶ Make sure to fill out email and password, then click register.
- ▶ Check your email and click ‘confirm email’ this step is important to get your account activated and ready to L<sup>A</sup>T<sub>E</sub>X
- ▶ L<sup>A</sup>T<sub>E</sub>X away :)

## Accessing LangSci Press overleaf template

- ▶ Visit the Language Science Press site
- ▶ On the right side select the fourth option: ‘Templates and tools’
- ▶ Select ‘Overleaf template for papers in edited volumes’
- ▶ On overleaf page will open, select the green button ‘open as a template’
- ▶ In case you are not logged in, it will asked you to do so.
- ▶ You will land on the Overleaf work space.

# L<sup>A</sup>T<sub>E</sub>X 101

- ▶ What is L<sup>A</sup>T<sub>E</sub>X?
  - ▶ Its a typesetting language developed by Scientist for Scientist
- ▶ What can you do with L<sup>A</sup>T<sub>E</sub>X?
  - ▶ it creates beautiful documents, charts, tables, symbols and even *syntax* trees.
- ▶ What can you do in L<sup>A</sup>T<sub>E</sub>X?
  - ▶ papers, presentations, spreadsheets, etc.
- ▶ How does it work?
  - ▶ You write your document in **plain text** with commands that describe the structure and meaning.
  - ▶ the L<sup>A</sup>T<sub>E</sub>X program processes your text and commands to produce a formatted document.

# Getting Started

- ▶ Commands start with a *backslash* `\`.
- ▶ Every document starts with a `\documentclass` command
- ▶ The argument in curly brackets `{ }` tells L<sup>A</sup>T<sub>E</sub>X what kind of document we are creating
- ▶ A percent sign `%` starts a comment -L<sup>A</sup>T<sub>E</sub>X will ignore the rest of the line.

## Caveats

- ▶ Quotation marks are a bit tricky:  
use a backtick ``` on the left and an apostrophe `'` on the right.

Single quotes: ``text'`.

Single quotes: `'text'`.

Double quotes: ```text''`.

Double quotes: `"text"`.

- ▶ Some common characters have special meanings in L<sup>A</sup>T<sub>E</sub>X:

`%`

percent sign

`#`

hash (pound / sharp) sign

`&`

ampersand

`$`

dollar sign

- ▶ If you just type these, you'll get an error. If you want one to appear in the output, you have to *escape* it by preceding it with a backslash.

`\$ \% \& \#`

`$ % & #`



# Errors

- ▶ L<sup>A</sup>T<sub>E</sub>X can get confused when it is trying to compile your document. If it does, it stops with an error, which you must fix before it will produce any output.

## Advice on Errors

1. Don't panic! Errors happen.
2. Fix them as soon as they arise — if what you just typed caused an error, you can start your debugging there.
3. If there are multiple errors, start with the first one — the cause may even be above it.

# Structured Document

- ▶ Tell L<sup>A</sup>T<sub>E</sub>X the `\title` and `\author` names in the preamble.
- ▶ Then use `\maketitle` in the document to actually create the title.
- ▶ Use the `abstract` environment to make an abstract.

```
\documentclass{article}

\title{The Title}
\author{A. Author}
\date{\today}

\begin{document}
\maketitle

\begin{abstract}
Abstract goes here...
\end{abstract}

\end{document}
```

## Your turn 1

Lets structure our document in the LangSci Press template  
Note the following:

- ▶ The abstract has to be pasted in the ‘preamble’ section.
- ▶ Make sure to list any packages int the ‘preamble’ section.  
Refer to the handouts for the ones specific to your field.
- ▶ if you get stuck you can ask me or Kelsey for support in the chat.

# Frame Title

- ▶ Just use `\section` and `\subsection`.
- ▶ Can you guess what `\section*` and `\subsection*` do?

```
\documentclass{article}
\begin{document}

\section{Introduction}
The problem of \ldots

\section{Method}
We investigate \ldots

\subsection{Sample Preparation}
\subsection{Data Collection}
\section{Results}
\section{Conclusion}

\end{document}
```

# Structured Document

- ▶ Use `\label` and `\ref` for automatic numbering.
- ▶ The `amsmath` package provides `\leqref` for referencing equations.

```
\documentclass{article}
\usepackage{amsmath} % for \eqref
\begin{document}

\section{Introduction}
\label{sec:intro}
In Section \ref{sec:method}, we \ldots

\section{Method}
\label{sec:method}
\begin{equation}
\label{eq:euler}
e^{i\pi} + 1 = 0
\end{equation}

By \eqref{eq:euler}, we have \ldots
\end{document}
```

## Your turn 2

Lets structure our document in the LangSci Press template complete the following:

- ▶ list all your sections and subsections.
- ▶ create references for your sections and subsections.
- ▶ if you get stuck you can ask me or Kelsey for support in the chat.

# Structuring Document

- ▶ Requires the `graphicx` package, which provides the `\includegraphics` command.
- ▶ Supported graphics formats include JPEG, PNG and PDF (usually).

```
\includegraphics[  
  width=0.5\textwidth]{gerbil}
```

```
\includegraphics[  
  width=0.3\textwidth,  
  angle=270]{gerbil}
```



Image license: CC0

# Tables

- ▶ Tables in L<sup>A</sup>T<sub>E</sub>X take some getting used to.
- ▶ Use the `tabular` environment from the `tabularx` package.
- ▶ The argument specifies column alignment — **left**, **right**, **right**.

```
\begin{tabular}{lrr}  
Item & Qty & Unit \ $ \\  
Widget & 1 & 199.99 \\  
Gadget & 2 & 399.99 \\  
Cable & 3 & 19.99 \\  
\end{tabular}
```

Item	Qty	Unit \$
Widget	1	199.99
Gadget	2	399.99
Cable	3	19.99



# Tables

- It also specifies vertical lines; use `\hline` for horizontal lines.

```
\begin{tabular}{|l|r|r|} \hline
Item & Qty & Unit \$ \\ \hline
Widget & 1 & 199.99 \\
Gadget & 2 & 399.99 \\
Cable & 3 & 19.99 \\ \hline
\end{tabular}
```

Item	Qty	Unit \$
Widget	1	199.99
Gadget	2	399.99
Cable	3	19.99

- Use an ampersand `&` to separate columns and a double backslash `\\` to start a new row (like in the `align*` environment that we saw in part 1).

## Your turn 3

Lets add more to our document in the LangSci Press template complete the following:

- ▶ Upload an image on to the environment section to the left of the source.
- ▶ embed image int your document.
- ▶ create one table.
- ▶ if you get stuck you can ask me or Kelsey for support in the chat.

## bibT<sub>E</sub>X 1

- ▶ Put your references in a .bib file in ‘bibtex’ database format.
- ▶ Most reference managers can export to bibtex format. Overleaf supports the following systems:
  - ▶ Zotero
  - ▶ Mendeley

## bibT<sub>E</sub>X 2

- ▶ Each entry in the `.bib` file has a *key* that you can use to reference it in the document. For example, is the key for this article:

```
@Article{,
  author = {},
  ...
}
```

- ▶ It's a good idea to use a key based on the name, year and title.
- ▶ L<sup>A</sup>T<sub>E</sub>X can automatically format your in-text citations and generate a list of references; it knows most standard styles, and you can design your own.

## bibT<sub>E</sub>X 3

- ▶ Use the `natbib` package<sup>1</sup> with `\citet` and `\citep`.
- ▶ Reference `\bibliography` at the end, and specify a `\bibliographystyle`.

```
\documentclass{article}
\usepackage{natbib}
\begin{document}

\citet{Brooks1997Methodology}
show that \ldots. Clearly, all odd numbers are prime
\citep{Jacobson1999Towards}.

\bibliography{bib-example}
% if 'bib-example' is the name of your bib file
\bibliographystyle{plainnat}
% try changing to abbrunat
\end{document}
```

<sup>1</sup>There is a new package with more features named `biblatex` but most of the articles templates still use `natbib`.

## Your turn 4

Lets add more to our document in the LangSci Press template complete the following:

- ▶ Upload your .bib file on to the enviroement section to the left of the source.
- ▶ Create two citations of your own.
- ▶ if you get stuck you can ask me or Kelsey for support in the chat.