

Day 03: L^AT_EX Templates (CV and Beamer)



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L^AT_EX101

March 23, 2022

- ▶ **Adapted from** – <https://www.learnlatex.org/>.
 - ▶ Day 1 – learnlatex.org lessons 1-6 (**Done!**)
 - ▶ Day 2 – learnlatex.org lessons 7-12 (**Done!**)
 - ▶ Day 3 – L^AT_EXtemplates (CV/resume, beamer presentations).
- ▶ **Slides Available** – <https://github.com/mdelrosa/latex-101>.
 - ▶ Template based on Clara Pavillet's Oxford Template
- ▶ **Slack back channel**
 - ▶ UC Davis Slack channel

Templates

CV/Resume Template

Beamer Template

Templates

Browsing for templates, uploading projects

- ▶ Writing documents from scratch is time-consuming, difficult.
- ▶ Instead, use templates!

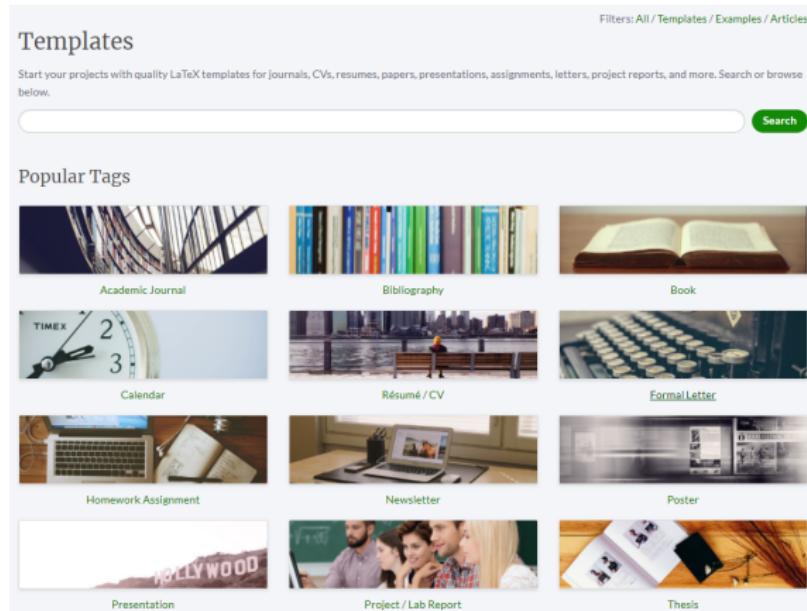


Figure 1: Template categories on Overleaf.

Templates

For academic journals, some official templates are available.

The figure displays three academic journal templates from the Overleaf platform:

- Open Geomechanics Template:** This template features a large "OPEN GEOMECHANICS" logo at the top. Below it, the subtitle "A title for your paper that is clear, succinct and informative" is displayed. The template includes sections for "Abstract," "Keywords," "References," and "Appendix." It also contains a "Manuscript Submission" section with a "Download Manuscript" button. The footer indicates "Open Geomechanics Template" and "This is the official template for papers to be submitted..."
- PNAS Nexus Template:** This template has a header with the PNAS Nexus logo. It includes sections for "Title," "Abstract," "Keywords," "References," and "Appendix." The footer indicates "PNAS Nexus Official" and "This is a template and guide for preparing papers for... Oxford University Press"
- Association for Computing Machinery (ACM) Template:** This template has a header with the ACM logo. It includes sections for "Title," "Abstract," "Keywords," "References," and "Appendix." The footer indicates "Association for Computing Machinery... Official" and "This is a sample file for ACM large trim, single column..."

Figure 2: Academic journal templates on Overleaf.

Uploading projects

Can also upload a L^AT_EX project as a .zip file

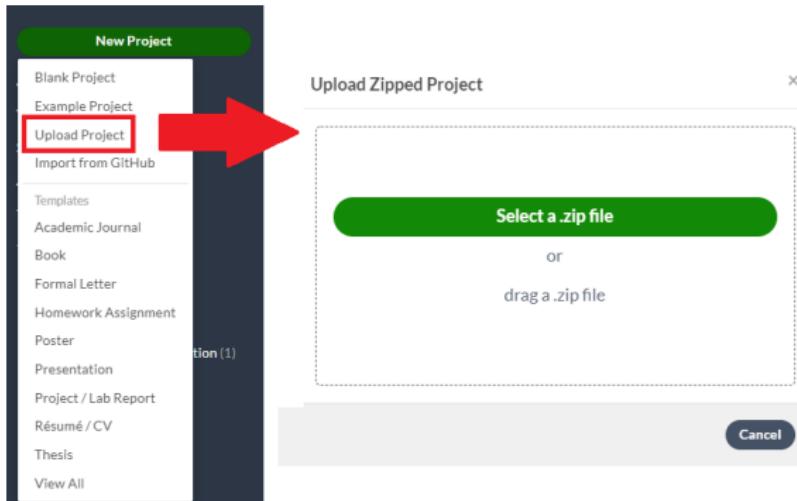


Figure 3: “New Project” → “Upload project”.

CV/Resume Template

Today, we'll work through a few templates.

1. Go to <https://github.com/mdelrosa/latex101/releases>
2. Find the latest release
3. Download CV.zip and both beamer_template.zip files

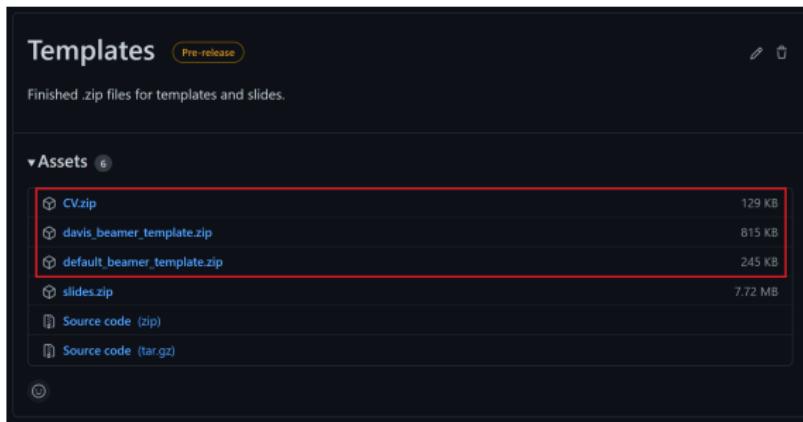


Figure 4: .zip files for today's templates.

Let's check out the CV project!

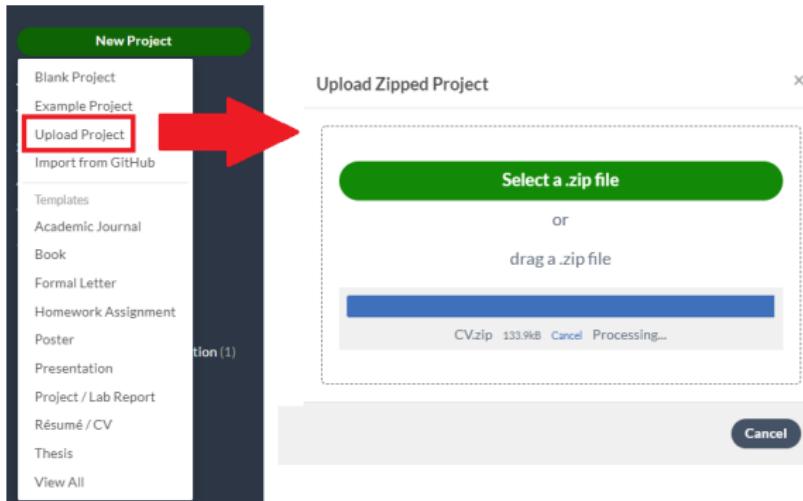


Figure 5: Uploading our CV project.

Project includes multiple files (.tex, .cls)

The screenshot shows the Overleaf interface with a sidebar on the left and a main workspace on the right.

Left Sidebar:

- File tree:
 - CV_template.fdb_latexmk
 - CV_template.fls
 - CV_template.pdf
 - CV_template.tex** (highlighted)
 - resume.cls

Right Workspace:

Preview Area:

Header: JOHN DOE
Davis, CA | (123)-056-7890 | jdoe@berkeley.edu | linkedin.com/in/johndoe

CAREER SUMMARY:
I am a driven professional with extensive knowledge in \LaTeX .

PROJECTS/RESEARCH EXPERIENCE:

Project	Start - Finish
Project 3 We proposed to do something. We achieved 95% performance increase in this particular metric.	2020-Present
Project 2 Summary of what you did.	2019-2020
Project 1 Summary of what you did..	2016-2019

SKILLS:

Computer: Proficient with \LaTeX
Languages: English

EDUCATION:

College, Davis, CA	Start - Finish
Degree, M.Sc., GPA: 4.0/4.0	
Anticipated graduation date: .	
Relevant Coursework: \LaTeX Workshop 2022, Award: The Best Job (2022)	

College, Davis, CA	Start - Finish
M.Sc., Degree, GPA: 4.0/4.0	
Anticipated graduation date: .	
Relevant Coursework: \LaTeX Workshop 2022, Award: The Best Job (2022)	

WORK EXPERIENCE:

Role — Company, Davis, CA	Start - Finish
Major accomplishments	
Role — Company, Davis, CA	Start - Finish
Major accomplishments	
Role — Company, Davis, CA	Start - Finish
Major accomplishments	

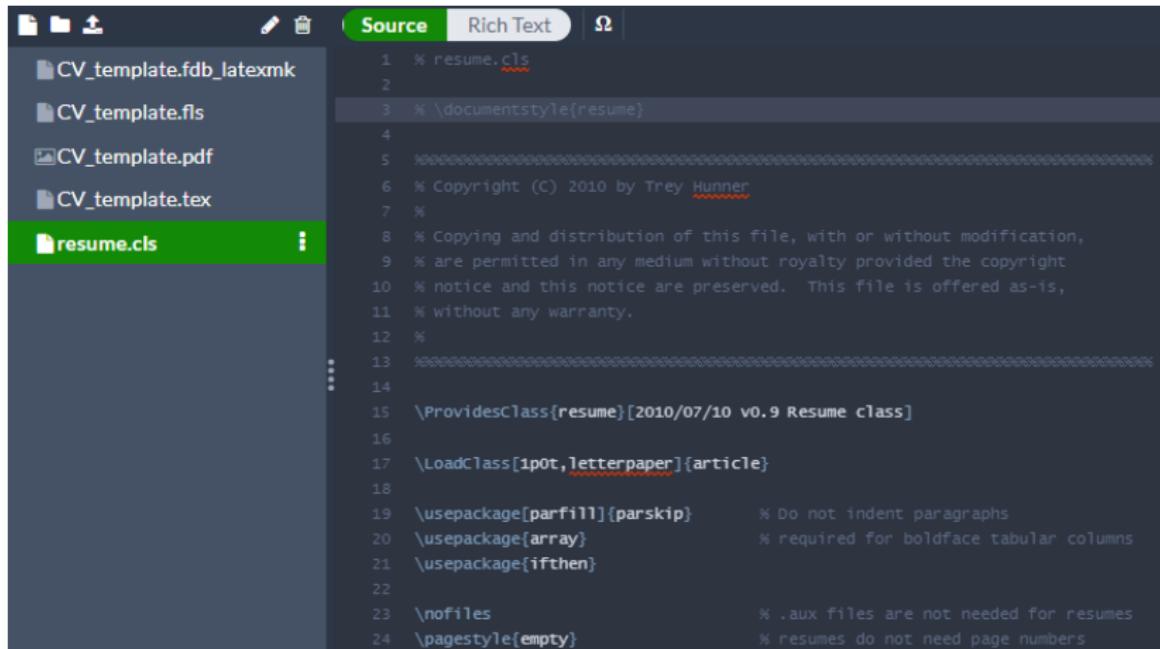
RELEVANT PUBLICATIONS:

Category/Project Name
• John Doe, James Doe, "Our very important research", in *Very Important Journal*, submitted.

Category/Project Name
• John Doe, John Doe, "A paper where I was second author", in *Important Journal*, vol. 1, pp. 1-3, 2022.

Figure 6: CV project in Overleaf.

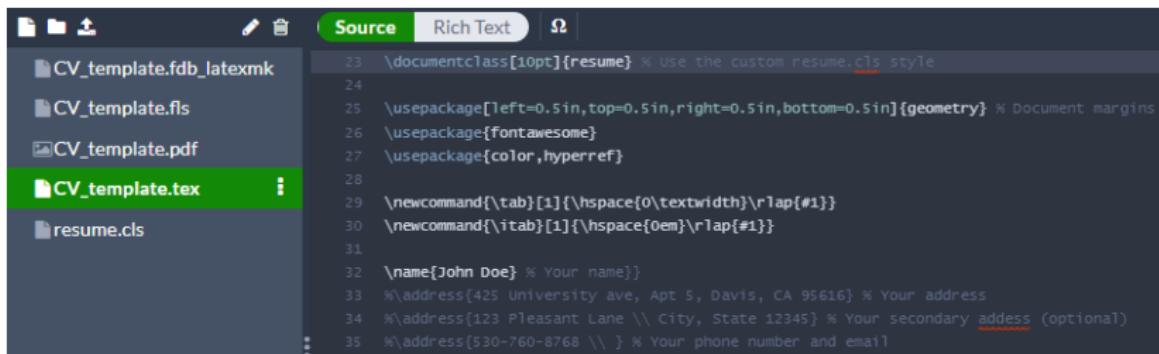
.cls files define custom document classes.

A screenshot of a LaTeX editor interface. On the left is a sidebar with icons for files and folders, showing 'CV_template.fdb_latexmk', 'CV_template.fls', 'CV_template.pdf', 'CV_template.tex', and 'resume.cls' which is highlighted with a green background. The main area has tabs for 'Source' (which is selected) and 'Rich Text'. The 'Source' tab displays the contents of the resume.cls file. The code is as follows:

```
1 % resume.cls
2
3 % \documentstyle[resume]
4
5 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
6 % Copyright (C) 2010 by Trey Hunner
7 %
8 % Copying and distribution of this file, with or without modification,
9 % are permitted in any medium without royalty provided the copyright
10 % notice and this notice are preserved. This file is offered as-is,
11 % without any warranty.
12 %
13 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
14
15 \ProvidesClass{resume}[2010/07/10 v0.9 Resume class]
16
17 \LoadClass[1p0t,letterpaper]{article}
18
19 \usepackage[parfill]{parskip}      % Do not indent paragraphs
20 \usepackage{array}                 % required for boldface tabular columns
21 \usepackage{ifthen}
22
23 \nofiles                         % .aux files are not needed for resumes
24 \pagestyle{empty}                  % resumes do not need page numbers
```

Figure 7: The resume.cls file in the CV project.

\documentclass imports the custom class from the .cls file.



The screenshot shows a LaTeX editor interface with a sidebar on the left displaying files: CV_template.fdb_latexmk, CV_template.fls, CV_template.pdf, CV_template.tex (which is selected and highlighted in green), and resume.cls. The main area has tabs for 'Source' (selected), 'Rich Text', and 'Ω'. The 'Source' tab displays the following LaTeX code:

```
23 \documentclass[10pt]{resume} % Use the custom resume.cls style
24
25 \usepackage[left=0.5in,top=0.5in,right=0.5in,bottom=0.5in]{geometry} % Document margins
26 \usepackage{fontawesome}
27 \usepackage{color,hyperref}
28
29 \newcommand{\tab}[1]{\hspace{0\textrm{width}}\rlap{\#1}}
30 \newcommand{\itab}[1]{\hspace{0em}\rlap{\#1}}
31
32 \name{John Doe} % Your name}
33 %\address{425 University ave, Apt 5, Davis, CA 95616} % Your address
34 %\address{123 Pleasant Lane \\ City, State 12345} % Your secondary address (optional)
35 %\address{530-760-8768 \\ } % Your phone number and email
```

Figure 8: Importing resume from resume.cls.

- ▶ \fa commands define icons.
- ▶ \hfill creates horizontal whitespace to fill current line

```
32 \name{John Doe} % Your name
33
34 \begin{document}
35 \vspace*{-5mm}
36 \begin{center}
37 \faMapMarker~Davis, CA \hfill
38 \faPhone~(123)-456-7890\hfill
39 \faEnvelope~\href{mailto:jdoe@ucdavis.edu}{jdoe@ucdavis.edu}\hfill %this generates an hyperlink
      to your email in the PDF
40 \faLinkedinSquare~\textcolor{red}{linkedin.com/in/johndoe}
41 \end{center}
```



JOHN DOE

Davis, CA

(123)-456-7890

jdoe@ucdavis.edu

linkedin.com/in/johndoe

Figure 9: CV header with icons for contact information.

- ▶ \rSection: custom Section environment.

```
46 %-----  
47 % CAREER SUMMARY SECTION  
48 %-----  
49 \vspace*{-2mm}  
50 \begin{rSection}{Career Summary}  
51 I am a driven professional with extensive knowledge in \LaTeX.  
52 \end{rSection}
```

CAREER SUMMARY



I am a driven professional with extensive knowledge in \LaTeX.

Figure 10: CV summary with an rSection environment.

```
54 %-----  
55 % RESEARCH EXPERIENCE SECTION  
56 %-----  
57 \vspace{-2mm}  
58 \begin{rSection}{Projects/Research Experience}  
59 {\bf Project 3} \hfill 2020-Present\\  
60 We proposed to do something. We achieved 95\% performance increase in this particular metric.  
61  
62 {\bf Project 2} \hfill 2019-2020\\  
63 Summary of what you did.  
64  
65 {\bf Project 1} \hfill 2016-2019\\  
66 Summary of what you did..  
67  
68 \end{rSection}
```

PROJECTS/RESEARCH EXPERIENCE

**Project 3**

2020-Present

We proposed to do something. We achieved 95% performance increase in this particular metric.

Project 2

2019-2020

Summary of what you did.

Project 1

2016-2019

Summary of what you did..

Figure 11: CV rSection for projects/research.

- ▶ `@{text}`: Inserts ‘text’ in every row.
- ▶ `>{\bfseries}`: Applies bold face to entire column.
- ▶ `\hspace{3ex}`: ex denotes horizontal size of ‘x’ in the given font.

```
71 %-----  
72 % SKILLS SECTION  
73 %-----  
74 \vspace*{-2mm}  
75 \begin{rSection}{Skills}  
76 \begin{tabular}{ @{} >{\bfseries}l @{\hspace{3ex}} l }  
77 | Computer: & Proficient with \LaTeX\\  
78 | Languages: & English  
79 \end{tabular}  
80 \end{rSection}
```

SKILLS



Computer: Proficient with L^AT_EX
Languages: English

Figure 12: CV rSection for skills.

```
85 %-----  
86 % EDUCATION SECTION  
87 %-----  
88 \vspace{-2mm}  
89 \begin{rSection}{Education}  
90 {\bf College}, \emph{Davis, CA} \hfill {Start - Finish}\\  
91 \emph{Degree}, GPA: 4.0/4.0\\  
92 Anticipated graduation date: .\\  
93 \hspace{5mm} {\small Relevant Coursework: \LaTeX Workshop 2022, \dots}\\  
94 \hspace{5mm} {\small Awards: The Doest John (2022)}  
95  
96 {\bf College}, \emph{Davis, CA} \hfill {Start - Finish}\\  
97 \emph{M.Sc. Degree}, GPA: 4.0/4.0\\  
98 Anticipated graduation date: .\\  
99 \hspace{5mm} {\small Relevant Coursework: \LaTeX Workshop 2022, \dots}\\  
100 \hspace{5mm} {\small Awards: The Doest John (2022)}  
101  
102 \end{rSection}
```



EDUCATION

College, Davis, CA

Start - Finish

Degree, GPA: 4.0/4.0

Anticipated graduation date: .

Relevant Coursework: \LaTeX Workshop 2022, ...

Awards: The Doest John (2022)

College, Davis, CA

Start - Finish

M.Sc. Degree, GPA: 4.0/4.0

Anticipated graduation date: .

Relevant Coursework: \LaTeX Workshop 2022, ...

Awards: The Doest John (2022)

Figure 13: CV rSection for education.

```
104 %-----  
105 % WORK EXPERIENCE SECTION  
106 %-----  
107 \newpage  
108 \begin{rSection}{Work Experience}  
109   {\bf Role} | Company, \emph{Davis, CA} \hfill {Start - Finish}  
110 \begin{itemize}  
111   \item{Major accomplishments}  
112 \end{itemize}  
113 {\bf Role} | Company, \emph{Davis, CA} \hfill {Start - Finish}  
114 \begin{itemize}  
115   \item{Major accomplishments}  
116 \end{itemize}\bf Role | Company, \emph{Davis, CA} \hfill {Start - Finish}  
117 \begin{itemize}  
118   \item{Major accomplishments}  
119 \end{itemize}  
120 \end{rSection}
```

WORK EXPERIENCE



Role — Company, *Davis, CA*

Start - Finish

- Major accomplishments

Role — Company, *Davis, CA*

Start - Finish

- Major accomplishments

Role — Company, *Davis, CA*

Start - Finish

- Major accomplishments

Figure 14: CV rSection for work experience.

```
119 %-----  
120 % PUBLICATIONS  
121 %-----  
122 \vspace{-2mm}  
123 \begin{rSection}{Relevant Publications\hspace{65mm}}  
124 {\bf Category/Project Name}  
125 \begin{itemize}  
126 | \item {\textbf{John Doe}, James Doe, "our very important research", in \textit{Very Important Journal}, submitted.  
127 \end{itemize}  
128 {\bf Category/Project Name}  
129 \begin{itemize}  
130 | \item Jean Doe, {\textbf{John Doe}, "A paper where I was second author", in \textit{Important Journal}, vol. 1, pp. 1-3, 2022.  
131 \end{itemize}  
132 \end{rSection}
```

RELEVANT PUBLICATIONS



Category/Project Name

- John Doe, James Doe, "Our very important research", in *Very Important Journal*, submitted.

Category/Project Name

- Jean Doe, John Doe, "A paper where I was second author", in *Important Journal*, vol. 1, pp. 1-3, 2022.

Figure 15: CV rSection for publications.

Beamer Template

Slide decks for academic presentations.

beamer: most common L^AT_EX package for presentations

Templates — Presentation

Templates tagged Presentation

Show all Templates

Communicating and sharing your work effectively with colleagues, supervisors and the general public often requires the preparation of a suitable presentation, tailored to that audience. These templates make it easy to create such a presentation, and the resulting set of slides is available for distribution in PDF format – perfect for sharing before or after your lecture, seminar or talk.

The screenshot displays a grid of six presentation templates, each with a thumbnail, title, and brief description:

- JNU Beamer Theme** by Heyun Xiao: A white template with a dark blue header bar containing the university logo and navigation links. It includes sections for "Supervisor" and "Candidate" information.
- Unofficial UNICAM thesis presentation template** by Fabio Pagnotta: A template featuring the University of Camerino logo at the top. It has sections for "Supervisor" and "Candidate" names.
- 四川大学虚拟偶像研究** by 1701 Wu: A template with a pink and light blue color scheme. It features the Sichuan University logo and text about a research project.
- Minha apresentação em L^AT_EX** by Elias J R Freitas: A template with a green header bar. It includes sections for "My name" and "Institution".
- Template For Presentation** by Jian Wang: A template with a yellow header bar. It includes sections for "Title", "Author", "Affiliation", and "Date".
- Presentation_Template_for_PhD (SONGLab)** by Qihao Lyu: A template with a white background and a watermark of the university logo. It includes sections for "Title", "Author", and "Affiliation".

Figure 16: Overleaf's presentation templates. Most are beamer!

Let's check out the beamer project!

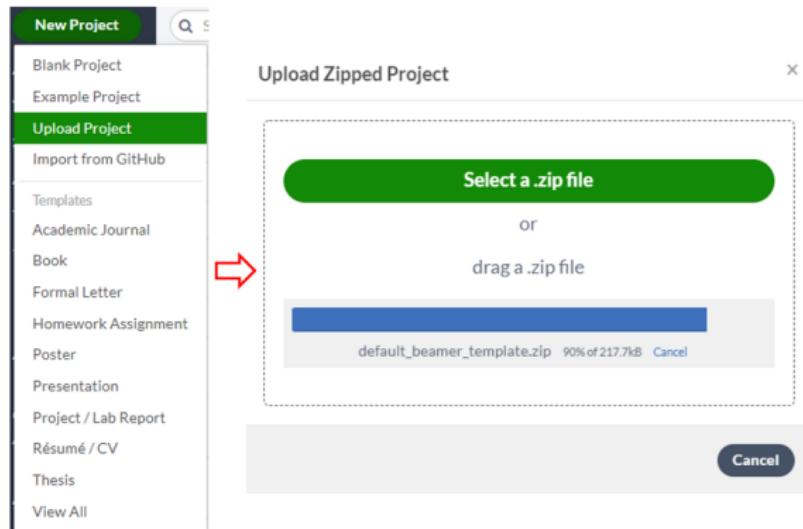


Figure 17: Uploading our default beamer template.

```
8 % Title page details
9 \title{Default Beamer Template}
10 \subtitle{\LaTeX{} 101}
11 \author{Jane Doe}
12 \institute{UC Davis GradPathways}
13 \date{\today}
14
15 % Image Logo
16 % \logo{\includegraphics[width=2.5cm]{DavisLogoV3.png}}
17 \titlegraphic{\includegraphics[width=2.5cm]{DavisLogoV3.png}}
18
19 \begin{document}
20
21 \begin{frame}
22     % Print the title page as the first slide
23     \titlepage
24 \end{frame}
```

Default Beamer Template
\LaTeX{} 101

Jane Doe

UC Davis GradPathways

March 13, 2022

UCDAVIS

Navigation icons: back, forward, search, etc.

Figure 18: Title slide for the default beamer template.

Outline

```
26 \label{outline}
27 \begin{frame}{Outline}
28   \tableofcontents % shows sections + subsections
29 \end{frame}
```

General L^AT_EX Environments

- Unordered Lists
- Ordered Lists
- Descriptions
- Tables
- Figures
- Footnotes

Beamer-specific Environments

- Columns
- Blocks
- Hyperlinks and Buttons



Figure 19: Using `\tableofcontents` in beamer.

```
43+ \begin{frame}[Ordered Lists]{Itemize environment (different shapes)}
44+ \setbeamertemplate{itemize items}{circle}
45+ \begin{itemize}
46+   \item First item
47+   \item Second item
48+   \item Third item
49+ \end{itemize}
50+
51+ \setbeamertemplate{itemize items}{square}
52+ \begin{itemize}
53+   \item First item
54+   \item Second item
55+   \item Third item
56+ \end{itemize}
57+
58+ \setbeamertemplate{itemize items}{ball}
59+ \begin{itemize}
60+   \item First item
61+   \item Second item
62+   \item Third item
63+ \end{itemize}
64+
65+ \setbeamertemplate{itemize items}{default} % reset
66+
67 \end{frame}
```

Ordered Lists

Itemize environment (different shapes)

- First item
- Second item
- Third item
- First item
- Second item
- Third item
- First item
- Second item
- Third item



Figure 20: Changing \itemize markers in beamer.

```
79+ \begin{frame}{Ordered Lists}{Enumerate environment (different shapes)}
80  \setbeamertemplate{enumerate items}{circle}
81+ \begin{enumerate}
82    \item First item
83    \item Second item
84    \item Third item
85  \end{enumerate}
86
87  \setbeamertemplate{enumerate items}{square}
88+ \begin{enumerate}
89    \item First item
90    \item Second item
91    \item Third item
92  \end{enumerate}
93
94  \setbeamertemplate{enumerate items}{ball}
95+ \begin{enumerate}
96    \item First item
97    \item Second item
98    \item Third item
99  \end{enumerate}
100
101 \setbeamertemplate{enumerate items}{default} % reset
102
103 \end{frame}
```

Ordered Lists

Enumerate environment (different shapes)

- ➊ First item
- ➋ Second item
- ➌ Third item

- ➊ First item
- ➋ Second item
- ➌ Third item

- ➊ First item
- ➋ Second item
- ➌ Third item



Figure 21: Changing \enumerate markers in beamer.

Columns

columns, column environment

```
157 \begin{frame}{columns}{\texttt{columns}, \texttt{column} environment}
158 \begin{columns}
159 | \begin{column}{0.5\textwidth} % First column
160 |   \tiny{\lipsum[1-1]}
161 | \end{column}
162 
163 \begin{column}{0.5\textwidth} % second column
164 |   \includegraphics[width=0.9\columnwidth]{DavisLogo3.png}
165 | \end{column}
166 \end{columns}
167 \end{frame}
```

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy facilisis id, aliquet vel, ullamcorper id, dolor. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, caecilius in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar vel, pretium ac, ligula. Cum sociis natoque nullam. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eggt orci sit amet orci dignissim rutrum.



Figure 22: Creating columns in beamer.

Blocks

Generic blocks

```
171 \label{blocks}
172 \begin{frame}{Blocks}{Generic blocks}
173
174 \begin{block}{Block 1}
175 This is a simple block in beamer.
176 \end{block}
177
178 \begin{alertblock}{Block 2}
179 This is an alert block in beamer.
180 \end{alertblock}
181
182 \begin{exampleblock}{Block 3}
183 This is an example block in beamer.
184 \end{exampleblock}
185
186 \end{frame}
```

Block 1

This is a simple block in beamer.

Block 2

This is an alert block in beamer.

Block 3

This is an example block in beamer.

Figure 23: Creating blocks in beamer.

Blocks
Math blocks

```
189+ \begin{frame}{Blocks}{Math blocks}
190
191+ \begin{theorem}
192     It's in \LaTeX{} so it must be true $ a^2 + b^2 = c^2 $.
193 \end{theorem}
194+ \begin{corollary}
195     a = b
196 \end{corollary}
197+ \begin{proof}
198     a + b = b + c
199 \end{proof}
200
201 \end{frame}
```

Theorem
It's in \LaTeX so it must be true $a^2 + b^2 = c^2$.

Corollary
 $a = b$

Proof.
 $a + b = b + c$ □



Figure 24: Creating math blocks in beamer.

Hyperlinks and Buttons

```
205 \begin{frame}[t]{Hyperlinks and Buttons}
206
207     \hyperlink{blocks}{Click here to return to 'Blocks'}
208
209     \hyperlink{outline}{\beamerbutton{Click here to return to 'Outline'}}
210
211 \end{frame}
```

Click here to return to 'Blocks'
Click here to return to 'Outline'



Figure 25: Creating hyperlinks/buttons in beamer.

The screenshot shows a Beamer presentation slide with the following components:

- General L^AT_EX Environments:** A sidebar on the left containing five small circular icons.
- Beamer-specific Environments:** A sidebar on the right containing three small circular icons.
- Title Area:** A large blue header bar with the text "Berlin Beamer Template" and "L^AT_EX 101".
- Text Content:** The main content area contains the following text:

```
6 \usetheme{Berlin} % compare with "default"
7
8 % Title page details
9 \title {Berlin Beamer Template}
10 \subtitle{\LaTeX{} 101}
11 \author{Jane Doe}
12 \institute{UC Davis GradPathways}
13 \date{\today}
```
- Author Information:** "Jane Doe" and "UC Davis GradPathways".
- Date:** "March 14, 2022".
- Logo:** "UCDAVIS" in a bold, white, sans-serif font.
- Page Navigation:** A footer bar at the bottom with icons for navigating between slides and sections.

Figure 26: berlin theme in beamer.

Inbuilt themes in beamer

A theme in beamer can be set using the command `\usetheme{themeName}`. Here is a 27 inbuilt themes in Beamer:

default	Darmstadt	Malmoe
AnnArbor	Dresden	Marburg
Antibes	Frankfurt	Montpellier
Bergen	Goettingen	PaloAlto
Berkeley	Hannover	Pittsburgh
Berlin	Ilmenau	Rochester
Boadilla	JuanLesPins	Singapore
CambridgeUS	Luebeck	Szeged
Copenhagen	Madrid	Warsaw

It should be noted that these themes apply changes to the global structure of the presentation.

Figure 27: List of available themes in beamer (from <https://latex-beamer.com/tutorials/beamer-themes/>).

This slide deck is a custom beamer theme!

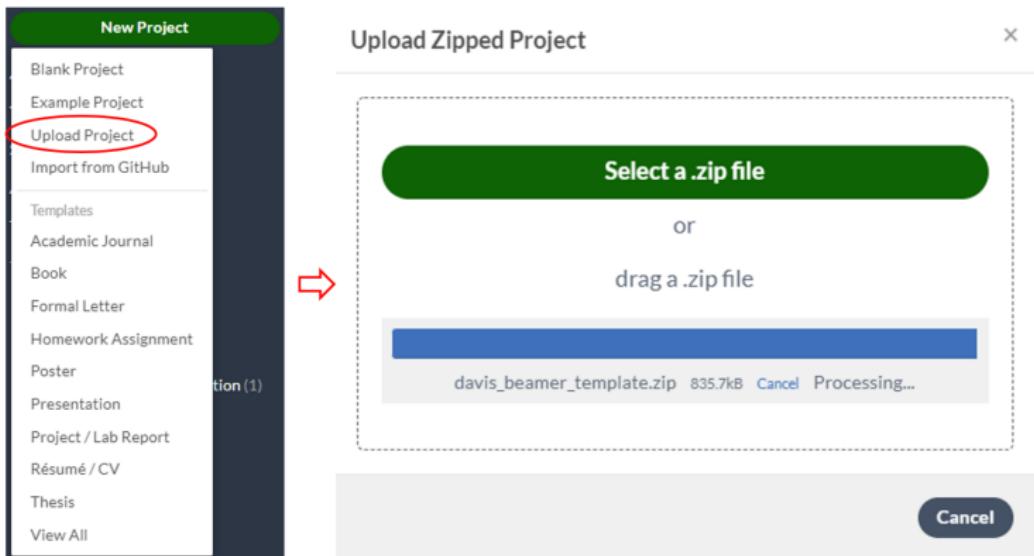


Figure 28: Uploading the Davis beamer template.

Davis Beamer Template
LATEX 101

```
25 \title {Davis Beamer Template}
26 \titlegraphic{\includegraphics[width=3cm]{Theme/Logos/DavisLogoV1.png}}
27 \subtitle{(\LaTeX{} 101)}
28 \author{Jane Doe}
29 \institute{UC Davis GradPathways}
30 \date{\today}
31
32 \begin{document}
33
34 \begin{frame}
35     % Print the title page as the first slide
36     \titlepage
37 \end{frame}
```



Jane Doe
UC Davis GradPathways

March 14, 2022



Figure 29: Title slide for Davis beamer template.

Note the \nofoot command. What happens if we drop this?

Citations

11

```
172 + \nofoot{  
173 + \begin{frame}[citations]  
174 | An example of a citation \cite{ref:oeetiker1995not} and a footnote reference.  
175 | \bfootnote{\bibentry{ref:oeetiker1995not}}  
176 \end{frame}  
177 }
```

An example of a citation [1] and a footnote reference.

T. Oetiker, H. Partl, I. Hyna, and E. Schlegl, "The not so short introduction to $\text{\LaTeX}2\epsilon$," *Electronic document available at <http://www.tex.ac.uk/tex-archive/info/lshort, 1995>*

Figure 30: Example of in text citation with reference in footer.

- ▶ Lessons 1-12 from learnlatex.org
- ▶ Today: Templates for Resume/CV, beamer (default, Davis)
- ▶ After the break: Free time for working on CV/beamer slides or for asking other L^AT_EX questions