中原大學

OOOO 學系

O 士 OOOO

英文論文範本 **(Template)**

This is an English thesis template.

指導教授：OOO

研究生 ：OOO

中華民國 OOO 年 O 月

摘要

本文件修改自中原大學論文模板。

關鍵字：研究所、論文

Abstract

This is a modified CYCU thesis template.

Keywords: postgraduate, thesis

Acknowledgement

I want to extend my many thanks to the numerous individuals who provided online solutions for various syntax and compiling issues. These sources are documented as commented links in this LaTeX source code template.

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1 Introduction

1.1 Description of template

This template was modified from the original version provided by Chung Yuan Christian University (CYCU) [1], written by Chen [2], and hosted on CYCU-AIoT-System-Lab [3].

1.2 Notes on usage

1. This template is **NOT** officially released or endorsed by CYCU. Please ensure that this template meets your requirements before use.
2. The creator of this template designed it to demonstrate LaTeX usage, reduce time spent on error correction, and incorporate necessary elements. The creator is not responsible for any issues arising from its use.
3. This template is distributed under the **Apache License 2.0** [4]. If you believe there are any license violations, please contact the creator at dachuan516@gmail.com.
4. Contributions are welcome and encouraged! If you have improvements or suggestions, please submit a pull request or reach out to the creator at dachuan516@gmail.com.

2 Syntax

2.1 Text

Display text in **bold**, *italic*, `typewriter` [5]. Note that underscores within "`\texttt{}`" require to be escaped like "`a\_b`".

Embed website links with displaying text, `https://www.overleaf.com/learn/latex/Hyperlinks` [6].

Use different formats of list to display [7]:

- item 1

  1. item 1

     Bold title item 1

Use special characters like ✔, ✘ [8].

Embed code from file as figure, as shown in Fig. 2.1 and 2.2.

```
#!/bin/bash

echo "hello world"
ping 8.8.8.8
```

Figure 2.1 Embed entire script file.

```
echo "hello world"
ping 8.8.8.8
```

Figure 2.2 Embed selected lines script file.

2.2 Figure

Various tools can be use to create figures and are roughly classified as 1 (best) to 3 (worst) in Table 2.1.

Table 2.1 Assessment of different tools to create figures.

Tool	Time required	Ease of use	Adjustability	Image quality	Scripting
Mermaid (PDF) [9]	1	1	3	1	1
draw.io (PDF) [10]	2	1	2	1	3
GNU Plot (PDF) [11]	3	3	1	1	1
MS PowerPoint	2	1	2	3	3
LaTeX TikZ [12]	3	3	1	1	1

To embed a downloaded figure or figure created with external tools mentioned in Table 2.1, the following format can be used for PNG, JPG and PDF (best quality) format [13].

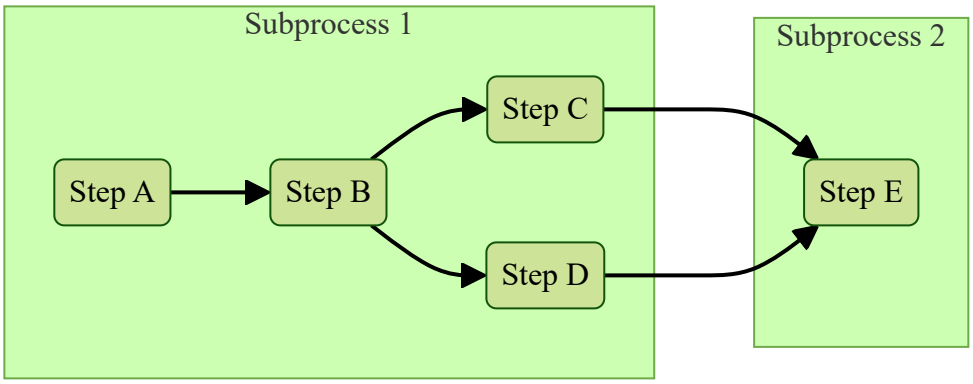

Figure 2.3 A example of embedding a PDF image.

To use TikZ in LaTeX, visit the Minimal Working Example (MWE) example page [14]. Additional packages will be needed and should be added in the `main.tex` file.

2.3 Table

A basic version of LaTeX two by two table with custom border is shown in Table 2.2; another table with specific column and row name is shown in Table 2.3; an additional table with merged rows and columns is shown in Table 2.4.

Table 2.2 Basic table.

cell	cell
cell	cell

Table 2.3 Table with column and row names.

	Column A	Column B
Row 1	cell	cell
Row 2	cell	cell

Table 2.4 Table with merged rows and columns.

	Column A	Column B
Row 1-2	cell	cell
	merged cell	
Row 3	cell	cell

If it is too confusing to edit the entire table manually, visit Table Generator for web-based Graphical User Interface (GUI) editor and copy the generated code into the document [15].

2.4 Equation

When displaying math symbols, they can be used inline like $a + b = c$. As shwon in 2.1, it can be used to create complicated equations. It can use additional "aligned" environment to align multiple equations against certain location within equation with symbol &, as shown in 2.2.

$$a^2 + b_1 = \frac{\sum_{n=1}^{m} c_n}{d} \tag{2.1}$$

$$\begin{aligned} a_1 + b &= c \\ \sqrt{d} &= c \\ d &= \int_f^e x^5 dx + \alpha^{2^2} \end{aligned} \tag{2.2}$$

2.5 Algorithm

Algorithms can be expressed with basic usage of the "algorithm" environment, as shown in Algorithm 1. If it requires math expressions, inline expression cna be mixed within, as shown in Algorithm 2 [16].

Algorithm 1 Basic example of algorithm.

if condition A **then**
    state 1
else
    state 2
end if

Algorithm 2 Advance example of algorithm.

if $a + b + c >$ threshold **then**
    $a + b + c$ is too large
else
    Normal state
end if

2.6 Citation

When citing materials, the related information should be recorded in **BibTeX** format and stored in the file "`reference.bib`" which is specified by command "`\{bibliography reference}`" in "`reference.tex`".

Different categories of source can now be referenced in the document including "books", "journals & magazines", and "conferences" [17, 18, 19]. Their corresponding authors can be cited with "Harding", "Washizaki and Yoshioka", "Allahabadi et al.".

In some special cases, special symbols like "-" from ACM Digital Library in the "pages" field making the compiled result display pages with "p." instead of "pp." [20]. These special cases need to fix manually [21].

2.7 Custom commands and additional packages

The referencing to different sections within the document can be achieved with the following syntax: Fig. 2.1, Table 2.1, 2.1 (equation), Algorithm 1, Section 2.7.

However, typing every single prefix of references is troublesome and error-prone. Another default syntax "`\autoref`" can be used to achieve the same effect: Fig. 2.1, Table 2.1, 2.1 (equation), Algorithm 1, Section 2.7. This requires the changes of "`autorefname`" in `main.tex`, and have the downside of unable to combine multiple references together.

To overcome the downside of "`\autoref`", "`\Cref`" can be used instead: Fig. 2.1–2.3, tables 2.1–2.4, (2.1) and (2.2), and algorithms 1 and 2. Note that escaping underscores used in "`\Cref`" like "`\_`" will result in error.

For both "`\autoref`" and "`\Cref`", their automatically added prefix can be adjusted with "`autorefname`" and "`\crefname`" correspondingly, and are configured in `main.tex`.

Keywords for both English ("`\keywords`") and Chinese ("`\keywordscn`") can be achieved with the special commands set in `main.tex`. Example of these are shown in `abstract_English.tex` and `abstract_Chinese.tex`.

The default layer of section are "\section", "\subsection", "\subsubsection", and "\paragraph". "\paragraph" is modified in this template to fit and number correctly.

Additional package "csquotes" is used for the "`\enquote`" command ("quotes"). Package "nth" is used for the "`\nth`" command (5^{th}). Package "xurl" is used so that command "`\href{}{}`" and "`\url{}`" still can have line wrap (`https://this.is.a.super.long.link.that.does.not.link.to.anything.but.to.trigger.line.wrap`).

Appendices

A Links

Table A.1 List of question links used in this template.

No.	Parameter
1	https://tex.stackexchange.com/questions/286094/insert-code-keywords-inline
2	https://tex.stackexchange.com/questions/197507/listings-escapeinside-option-is-not-working-for-me
3	https://tex.stackexchange.com/questions/313507/autoref-for-algorithms
4	https://tex.stackexchange.com/questions/142687/customize-of-autoref
5	https://tex.stackexchange.com/questions/20698/reference-multiple-subfloated-figures-using-refx-y-z-to-give-fig-1a-1b-1c-in
6	https://tex.stackexchange.com/questions/144759/how-to-modify-the-label-output-in-cleveref-and-varioref
7	https://ctan.mirror.twds.com.tw/tex-archive/macros/latex/contrib/cleveref/cleveref.pdf
8	https://tex.stackexchange.com/questions/381119/how-to-make-a-range-reference-use-an-en-dash
9	https://tex.stackexchange.com/questions/508107/lines-abstract-keyword
10	https://tex.stackexchange.com/questions/69379/how-do-i-cite-author-in-latex
11	https://www.overleaf.com/learn/latex/Bibliography_management_with_natbib
12	https://tex.stackexchange.com/questions/61877/natbib-sorting-and-citation-order-by-appearance
13	https://en.wikibooks.org/wiki/LaTeX/Special_Characters
14	https://tex.stackexchange.com/questions/72945/how-to-merge-cells-vertically
15	https://tex.stackexchange.com/questions/4118/whats-the-quickest-way-to-write-2nd-3rd-etc-in-latex
16	https://tex.stackexchange.com/questions/3033/forcing-linebreaks-in-url
17	https://tex.stackexchange.com/questions/2099/how-to-include-svg-diagrams-in-latex
18	https://graphicdesign.stackexchange.com/questions/5880/how-to-export-an-inkscape-svg-file-to-a-pdf-and-maintain-the-integrity-of-the-im
19	https://tw.mirrors.cicku.me/ctan/macros/xetex/latex/xecjk/xeCJK.pdf
20	https://tex.stackexchange.com/a/60218

References

[1] 中原大學張靜愚紀念圖書館 | CYCU Chang Ching Yu Memorial Library. Thesis/dissertation template. https://www.lib.cycu.edu.tw/cycu/Fpage.action?muid=440&fid=410&lang=en_US&changeLang=true, 2024. Accessed: 2024-09-01.

[2] Da-Chuan Chen. belongtothenight github. https://github.com/belongtothenight, 2024. Accessed: 2024-09-01.

[3] CYCU-AIoT-System-Lab. Cycu-aiot-system-lab github. https://github.com/CYCU-AIoT-System-Lab, 2024. Accessed: 2024-09-01.

[4] The Apache Software Foundation. Licenses. https://www.apache.org/licenses/, 2024. Accessed: 2024-09-02.

[5] Overleaf. Font sizes, families, and styles. https://www.overleaf.com/learn/latex/Font_sizes%2C_families%2C_and_styles, 2024. Accessed: 2024-09-03.

[6] Overleaf. Hyperlinks. https://www.overleaf.com/learn/latex/Hyperlinks, 2024. Accessed: 2024-09-03.

[7] Overleaf. Lists. https://www.overleaf.com/learn/latex/Lists, 2024. Accessed: 2024-09-03.

[8] Walter Scmidt. pifont –access to postscript standard symbol and dingbats fonts. https://ctan.org/pkg/pifont?lang=en, 2024. Accessed: 2024-09-03.

[9] Mermaid. About mermaid. https://mermaid.js.org/intro/, 2024. Accessed: 2024-09-03.

[10] draw.io. draw.io. https://www.drawio.com/, 2024. Accessed: 2024-09-03.

[11] Gnuplot. gnuplot homepage. http://www.gnuplot.info/, 2024. Accessed: 2024-09-03.

[12] TikZ. Tikz.net. https://tikz.net/, 2024. Accessed: 2024-09-03.

[13] Overleaf. Inserting images. https://www.overleaf.com/learn/latex/Inserting_Images, 2024. Accessed: 2024-09-03.

[14] TEXample.net. Tikz and pgf examples. https://texample.net/tikz/examples/all/, 2024. Accessed: 2024-09-03.

[15] TableGenerator.com. Table generator. https://www.tablesgenerator.com/, 2024. Accessed: 2024-09-03.

[16] Overleaf. Algorithms. https://www.overleaf.com/learn/latex/Algorithms, 2024. Accessed: 2024-09-03.

[17] Verity Harding. 2024.

[18] Hironori Washizaki and Nobukazu Yoshioka. Ai security continuum: Concept and challenges. In *2024 IEEE/ACM 3rd International Conference on AI Engineering – Software Engineering for AI (CAIN)*, pp. 269–270, 2024.

[19] Himanshi Allahabadi, Julia Amann, Isabelle Balot, Andrea Beretta, Charles Binkley, Jonas Bozenhard, Frédérick Bruneault, James Brusseau, Sema Candemir, Luca Alessandro Cappellini, Subrata Chakraborty, Nicoleta Cherciu, Christina Cociancig, Megan Coffee, Irene Ek, Leonardo Espinosa-Leal, Davide Farina, Geneviève Fieux-Castagnet, Thomas Frauenfelder, Alessio Gallucci, Guya Giuliani, Adam Golda, Irmhild van Halem, Elisabeth Hildt, Sune Holm, Georgios Kararigas, Sébastien A. Krier, Ulrich Kühne, Francesca Lizzi, Vince I. Madai, Aniek F. Markus, Serg Masis, Emilie Wiinblad Mathez, Francesco Mureddu, Emanuele Neri, Walter Osika, Matiss Ozols, Cecilia Panigutti, Brendan Parent, Francesca Pratesi, Pedro A. Moreno-Sánchez, Giovanni Sartor, Mattia Savardi, Alberto Signoroni, Hanna-Maria Sormunen, Andy Spezzatti, Adarsh Srivastava, Annette F. Stephansen, Lau Bee Theng, Jesmin Jahan Tithi, Jarno Tuominen, Steven Umbrello, Filippo Vaccher, Dennis Vetter, Magnus Westerlund, Renee Wurth, and Roberto V. Zicari. Assessing trustworthy ai in times of covid-19: Deep learning for predicting a multiregional score conveying the degree of lung compromise in covid-19 patients. *IEEE Transactions on Technology and Society*, vol. 3(4):272–289, 2022. doi: 10.1109/TTS.2022.3195114.

[20] XiaoFeng Wang. Security of ai, by ai and for ai: Charting new territories in ai-centered cybersecurity research. In *Proceedings of the 19th ACM Asia Conference on Computer and Communications Security*, ASIA CCS '24, p. 1115 – 1116, New York, NY, USA, 2024. Association for Computing Machinery. ISBN 9798400704826. doi: 10.1145/3634737.3665024. URL `https://doi.org/10.1145/3634737.3665024`.

[21] XiaoFeng Wang. Security of ai, by ai and for ai: Charting new territories in ai-centered cybersecurity research. In *Proceedings of the 19th ACM Asia Conference on Computer and Communications Security*, ASIA CCS '24, pp. 1115–1116, New York, NY, USA, 2024. Association for Computing Machinery. ISBN 9798400704826. doi: 10.1145/3634737.3665024. URL `https://doi.org/10.1145/3634737.3665024`.