

國立陽明交通大學  
資訊學院碩士在職專班  
博士論文

Degree Program of Computer Science  
National Yang Ming Chiao Tung University  
Doctoral Dissertation

論文名稱  
English Title

研究生：學生名字 (Wu, XXXX)

指導教授：指導教授名字 (Tseng, OOOO)

中華民國 一一一年八月

August 2022

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English Title

研究生：學生名字

Student：XXXX Wu

指導教授：指導教授名字 博士

Advisor：Dr. OOOO Tseng



August 2022

Taiwan, Republic of China

中華民國 一一一年八月

# 誌 謝

謝天謝地



學生名字於

國立陽明交通大學 資訊學院 碩士在職專班

中華民國 一一年八月

## 論文名稱

學生：學生名字

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國立陽明交通大學  
資訊學院碩士在職專班

## 摘 要

中文摘要就從這邊開始寫。

關鍵字：中文, 摘要, 關鍵詞, 5-7 個, 不要多, 也不要少



## English Title

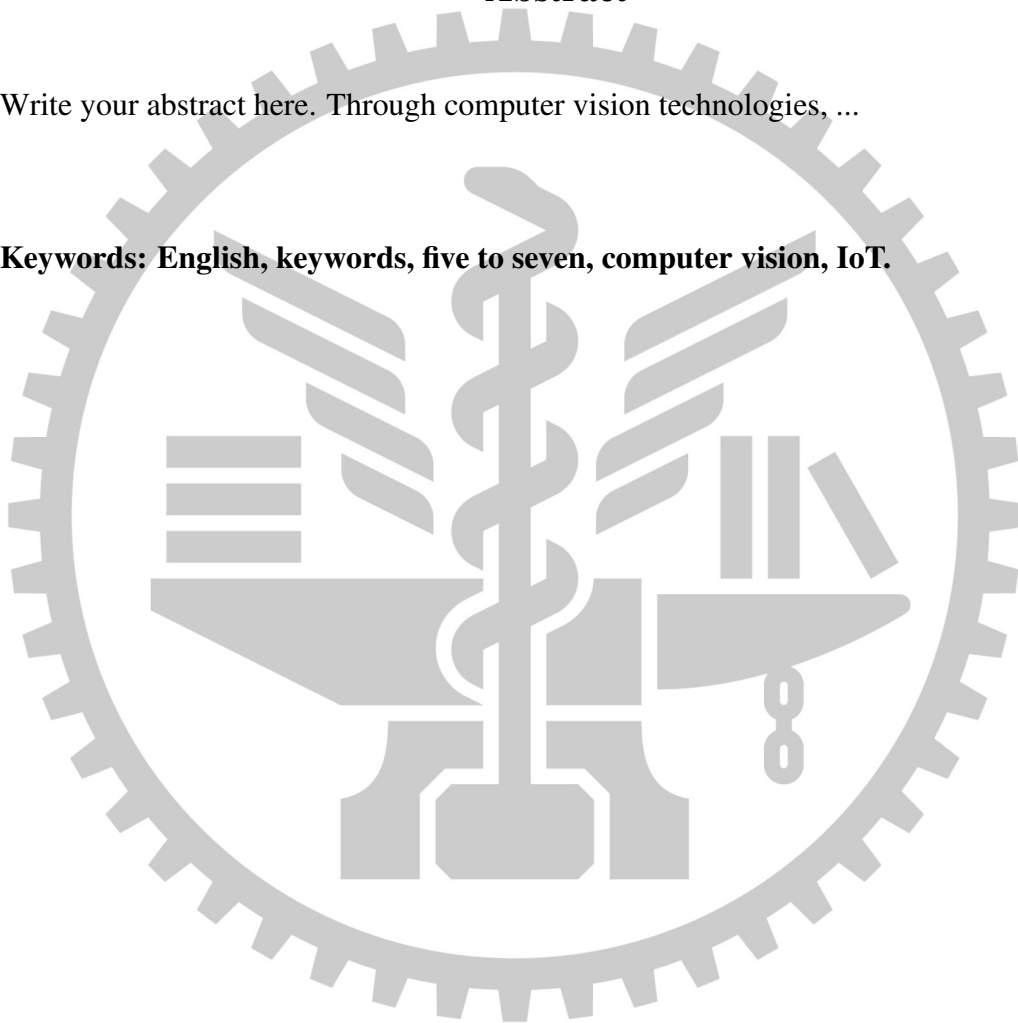
Student : XXXX Wu      Advisor: Dr. OOOO Tseng

Degree Program of Computer Science  
National Yang Ming Chiao Tung University

## Abstract

Write your abstract here. Through computer vision technologies, ...

**Keywords:** English, keywords, five to seven, computer vision, IoT.

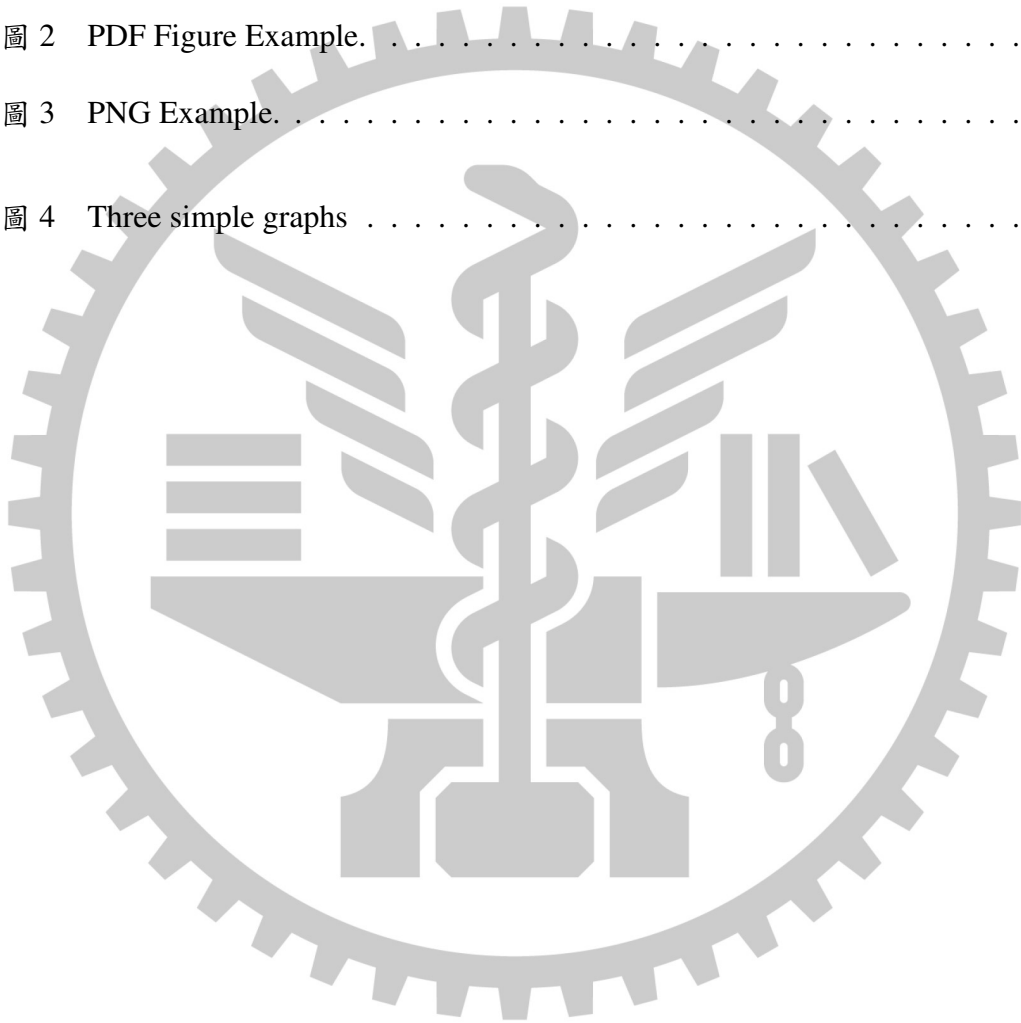


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# 第一章、Introduction

語法大幅度修改 (!?), 改成 xelatex 去編譯. 現在中文內容可以直接使用**粗體**跟斜體了.

## 1.1 測試 0

### 1.1.1 測試 1

還有研究一下 overleaf 支援的字體清單: <https://bit.ly/3MocQG3>

目前選擇 TW-Kai, 這個字體同時支援繁體與簡體中文, 有一些特殊字可以直接顯示, 像是之前有人問過的核苷酸.

#### 1.1.1.1 測試 2

Video-based surveillance systems have been widely used in places such as plaza, office, factory, hotel, and conference hall for security purposes[1],[2].

The rest of this paper is organized as follows. Chapter 2 reviews some related work. Chapter 3 introduces our system architecture. Chapter 4 explains the details of our pairing algorithm. Performance evaluation results are in Chapter 5. Conclusions are in Chapter 6.

## 第二章、Related Work

通常第二段就是寫相關的參考文獻，只有 cite 到的文章才會出現編號並且出現在最後面。舉例來說，如果在 ref.bib 裡放了 10 篇論文，可是內文只有 cite 其中五篇，編譯出來的結果就只會顯示這五篇。Ref 有很多種風格寫法，本篇論文是採用 `bibliographystyle{IEEEtran}`，overleaf 上有其他 style 語法，可以參考：

[https://www.overleaf.com/learn/latex/Bibtex\\_bibliography\\_styles](https://www.overleaf.com/learn/latex/Bibtex_bibliography_styles)

This is related work. The PID issue has been widely studied in the field of computer vision and IoT by using various devices. In the field of computer vision, camera is the most popular device. Face recognition technologies are surveyed in [3]. Reference [4] focuses on how to collect a very large training dataset and build a very deep CNN model for face recognition, but training process is extremely computationally expensive. A hybrid RFID and computer vision system for localization and tracking of RFID tags is proposed in [5]. Reference [6] presents a solution which combines RFID with object tracking through cameras. Reference [7] presents a fusion system consisting of an RFID reader and a camera crew on a mobile robot platform to track people. These works [5],[6],[7] fuse data from camera and RFID, but their accuracy highly depends on the density of RFID antennas. Thus, they are not suitable for longer range PID. Reference [8] proposes a fast multi-people tracking algorithm for service robots through RGB-D camera. In [9], people detection is realized by dense depth data, called Histogram of Oriented Depths (HOD).

## 第三章、System Model

如果想在 latex 裡面插入表格, 可以搜尋 latex table generator, 有很多線上網站可以參考. 我個人都是使用線上網站去產生大致的語法, 然後再根據個人喜好去做微調, wiki-book 有很多資料可以參考, 網址在這邊: <https://en.wikibooks.org/wiki/LaTeX/Tables>

如果要引用表格, 記得在 table 裡加上 label 的語法, 然後就可以呼叫 Tab 1, 寫中文的就是表 1. 通常 Table 的 caption 是寫在表格的上面, 圖片則是放在下面.

表 1: This is a table.

A	1	4	7
B	2	5	8
C	3	6	9

後來在圖書館的“2022 研究攻略營論文寫作實戰技巧(顏安孜老師)”看到另一種作法, 網址: <http://bit.ly/3yE06Hx>

裡面的講義有提到 Excel2LaTeX, 細節可以去看圖書館的連結, 裡面有放講義, 下方是顏安孜老師的講義截圖。(不過我個人偏好直接使用 latex 的表格語法, 這種轉檔的東西有時候會怪怪的)

表 2: Comparison on model efficiency and model size.

Model	Training & Test	Model Size
LTD-GCN	<b>11ms &amp; 4.5ms</b>	2.50M & 2.50M
LTD-GCN-i	<u>13ms &amp; 4.6ms</u>	2.75M & 2.76M

## 如何製作表格

```

498 Immediately following this sentence is the
499 point at which Table \ref{tab:freq} is
500 included in the input file; compare the
501 placement of the table here with the table
502 in the printed output of this document.
503
504 % t: top, b: bottom, h: here
505 \begin{table}[t]
506 \caption{Frequency of Special Characters}
507 \label{tab:freq}
508 \begin{tabular}{ccl}
509 \toprule
510 Non-English or Math&Frequency&Comments\\
511 \midrule
512 \0 & 1 in 1,000 & For Swedish names\\
513 \pi & 1 in 5 & Common in math\\
514 \$ & 4 in 5 & Used in business\\
515 \Psi^2_1 & 1 in 40,000 & Unexplained usage\\
516 \bottomrule
517 \end{tabular}
518 \end{table}

```

to complete a the rights man- pyright transfer, ment. the author will it has been sub- must be copied rce is compiled, d text to several st page. age. der(s). u are preparing e correct set of

### • 建議使用 Excel2LaTeX

Conference acronym 'XX, June 03–05, 2018, Woodstock, NY

Table 1: Frequency of Special Characters

Non-English or Math	Frequency	Comments
∅	1 in 1,000	For Swedish names
π	1 in 5	Common in math
\$	4 in 5	Used in business
Ψ <sup>2</sup> <sub>1</sub>	1 in 40,000	Unexplained usage

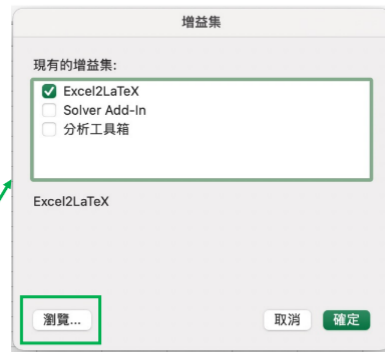
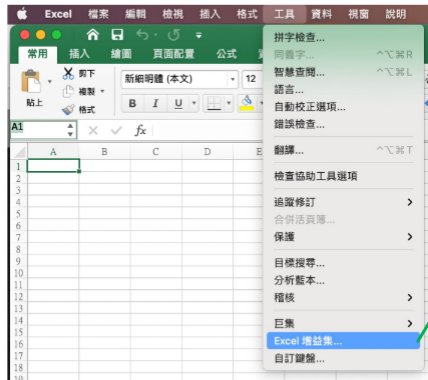
to be aligned properly in rows and columns, with the desired horizontal and vertical rules. Again, detailed instructions on tabular material are found in the *LaTeX User's Guide*.

Immediately following this sentence is the point at which Table 1 is included in the input file; compare the placement of the table here with the table in the printed output of this document.

To set a wider table, which takes up the whole width of the page's

48

## Excel2LaTeX



下載連結: <https://www.ctan.org/tex-archive/support/excel2latex/>

49

製作好表格之後，  
框住表格範圍，  
點擊增益集的按鈕，  
即可產生表格語法

1. Select the table range in Excel.
2. Click the 'Excel 增益集' (Excel Add-ins) button in the ribbon.
3. Click the 'Excel2LaTeX' button in the Add-ins dialog.
4. The Excel2LaTeX application window opens, showing the selected range and conversion options.
5. Click the 'Copy to Clipboard' button to copy the generated LaTeX code.

50

圖 1: Excel2LaTeX.

## 第四章、Data Fusion Algorithm

這個是插入圖片的範例，圖片都放在 img 資料夾裡面。檔案格式有支援: JPG, PNG, PDF, EPS. 就使用自己習慣的繪圖工具，比較常見的應該就是 power point! power point 可以把繪圖區另存成 PDF, JPG, PNG, 還有 SVG. SVG 可以再轉成 PDF, 這樣圖片縮放還是會很清楚，可以把範例的兩張圖片都放大來看，應該可以看出差別。

最近常用的作法是，先使用 PPT 畫一張大圖，然後儲存成 PDF, 如果有白邊想去除的話，可以找線上網站裁切 (關鍵字: pdf crop free)

圖片出現的位置是由 latex 去決定，有時候會出現在奇怪的地方，這時候只能多爬文、嘗試各種參數，或者把整段圖片 code 放在前面試試看。

overleaf 上有插入圖片的介紹: [https://www.overleaf.com/learn/latex/Inserting\\_Images](https://www.overleaf.com/learn/latex/Inserting_Images)

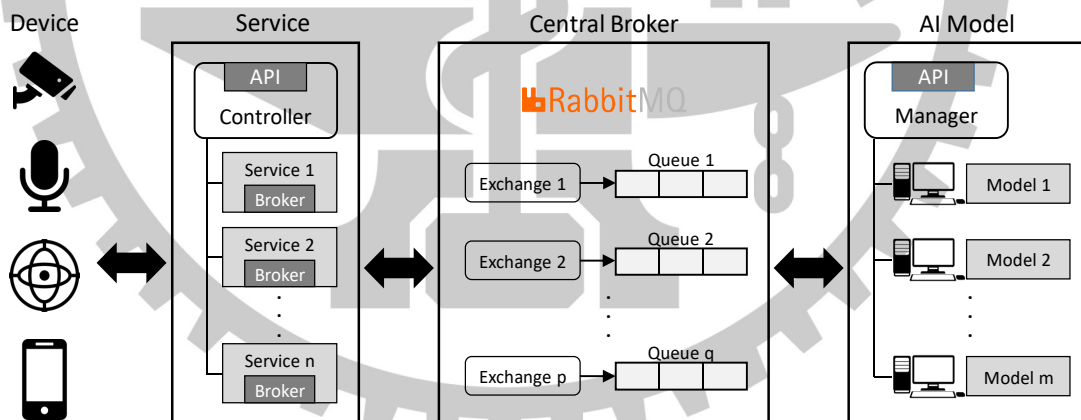


圖 2: PDF Figure Example.

### 4.1 Data Preprocessing

An example for section. Fig 2 is PDF. Fig 3 is PNG.

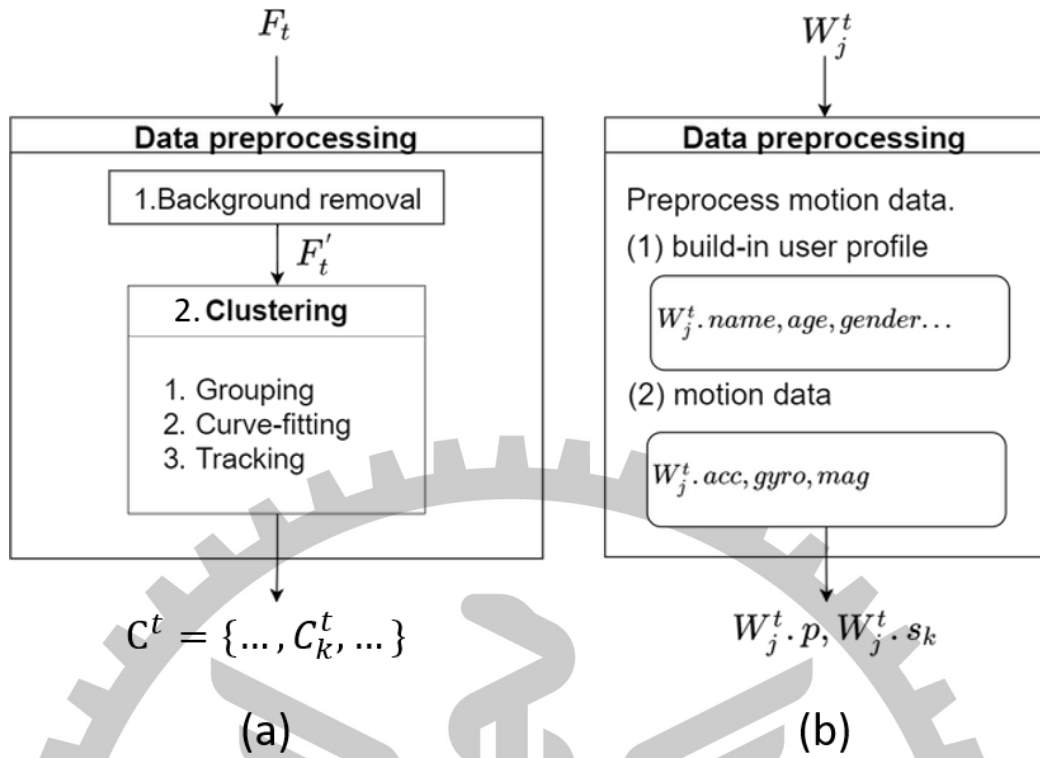


圖 3: PNG Example.

#### 4.1.1 2D LiDAR Data

An example for subsection. 寫中文就是圖 2 跟圖 3.

## 第五章、Performance Evaluation

In this section, 整理效能評估.

下面是 subfigure 的範例 (其實我個人不常用這個語法, 我都直接在繪圖工具上把圖片整合在一起 XD)



圖 4: Three simple graphs

## 第六章、Conclusions

Write your conclusion here.



## 參考文獻

- [1] R. T. Collins *et al.*, “中文 a system for video surveillance and monitoring,” *VSAM final report*, pp. 1–68, 2000.
- [2] X. Wang, “Intelligent multi-camera video surveillance: A review,” *Pattern Recognition Letters*, vol. 34, no. 1, pp. 3–19, 2013.
- [3] W. Zhao, R. Chellappa, P. J. Phillips, and A. Rosenfeld, “Face recognition: A literature survey,” *ACM Computing Surveys*, vol. 35, no. 4, pp. 399–458, 2003.
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- [6] A. Isasi, S. Rodriguez, J. L. De Armentia, and A. Villodas, “Location, tracking and identification with rfid and vision data fusion,” in *Proc. European Workshop on Smart Objects: Systems, Technologies and Applications*, 2010, pp. 1–6.
- [7] T. Germa, F. Lerasle, N. Ouadah, and V. Cadenat, “Vision and rfid data fusion for tracking people in crowds by a mobile robot,” *Computer Vision and Image Understanding*, vol. 114, no. 6, pp. 641–651, 2010.
- [8] M. Munaro and E. Menegatti, “Fast rgb-d people tracking for service robots,” *Autonomous Robots*, vol. 37, no. 3, pp. 227–242, 2014.

- [9] L. Spinello and K. O. Arras, "People detection in rgb-d data," in *Proc. IEEE/RSJ International Conference on Intelligent Robots and Systems*, 2011, pp. 3838–3843.



# Appendix 附錄

本附錄整理撰寫論文時常見的排版與語法注意事項，供大家撰寫與校稿時參考，請記得看 latex 的語法。(此段落主要由 ChatGPT 撰寫整理 XD)

## 文字與標點

- 英文引號請使用成對反引號與直引號：“text” “text”。
- 破折號 (dash) 有三種：‘-’ (連字號，如 *pre-trained*)、‘–’ (範圍，如 10–20)、‘—’ (句中強調，如 the result—as expected—was correct)。
- 省略號請使用 `\ldots` 而非三個句點：A, B, C..., Z。
- 數值與單位間需留不換行空白：10 km, 30°C。
- 中英文混排時，中文與英文之間宜留一半形空白，例如：中文 English 中文。

## 數學與符號

- 數學變數自動為斜體，單位或文字常數須使用 `\mathrm{}` 或 `\text{}`，如  $v = 10 \text{ m/s}$ 。
- 三角函數、極值運算等應以數學命令表示： $\sin \theta$ ,  $\max(x, y)$ 。

- 向量或矩陣可用粗體： $\mathbf{x} = [x_1, x_2]^T$ 。
- 多行方程式請使用 `align` 環境，勿以多個 `equation` 拆寫。

## 圖表與引用

- 圖片標題 (caption) 置於圖下方
- 表格標題置於表上方。
- 參照圖表時請使用 `\ref{}` 或 `\autoref{}`，勿手動輸入編號。  
例：As shown in Fig. 1.
- 表格建議使用 `booktabs` 套件：`\toprule`、`\midrule`、`\bottomrule`。

## 文獻與引用

- 文獻引用使用 `\cite{key}` 或 `\parencite{key}`。
- 多篇同時引用可寫為 `\cite{a,b,c} [1-3]`。
- 特殊大小寫 (如 GPU, LaTeX) 須以大括號保留：`{GPU}`。