國立陽明交通大學

資訊學院碩士在職專班

碩士論文

Degree Program of Computer Science

National Yang Ming Chiao Tung University

Master Thesis

# 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

# 論文名稱

# 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

國立陽明交通大學
資訊學院碩士在職專班
碩士論文

A Thesis
Submitted to Degree Program of Computer Science
College of Computer Science
National Yang Ming Chiao Tung University
in partial Fulfillment of the Requirements
for the Degree of
Master of Science
in
Computer Science

August 2022
Taiwan, Republic of China

中華民國 一一一年八月

# 誌　謝

謝天謝地

XXXXX於

國立交通大學資訊學院碩士在職專班

中華民國 一一一年八月

論文名稱

學生：學生名字　　指導教授：指導教授名字 博士

國立陽明交通大學 資訊學院碩士在職專班 碩士班

## 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.**

# Contents

Acknowledgement ..... i

Chinese Abstract ..... ii

English Abstract ..... iii

Contents ..... iv

List of Figures ..... vi

List of Tables ..... vii

1 Introduction ..... 1

2 Related Work ..... 2

3 System Model ..... 3

4 Data Fusion Algorithm ..... 5

4.1 Data Preprocessing ..... 6

4.1.1 2D LiDAR Data ..... 6

5 Performance Evaluation ..... 7

6 Conclusions ..... 8

References ..... 9

# List of Figures

Figure 1 Excel2LaTeX. . . . . 4

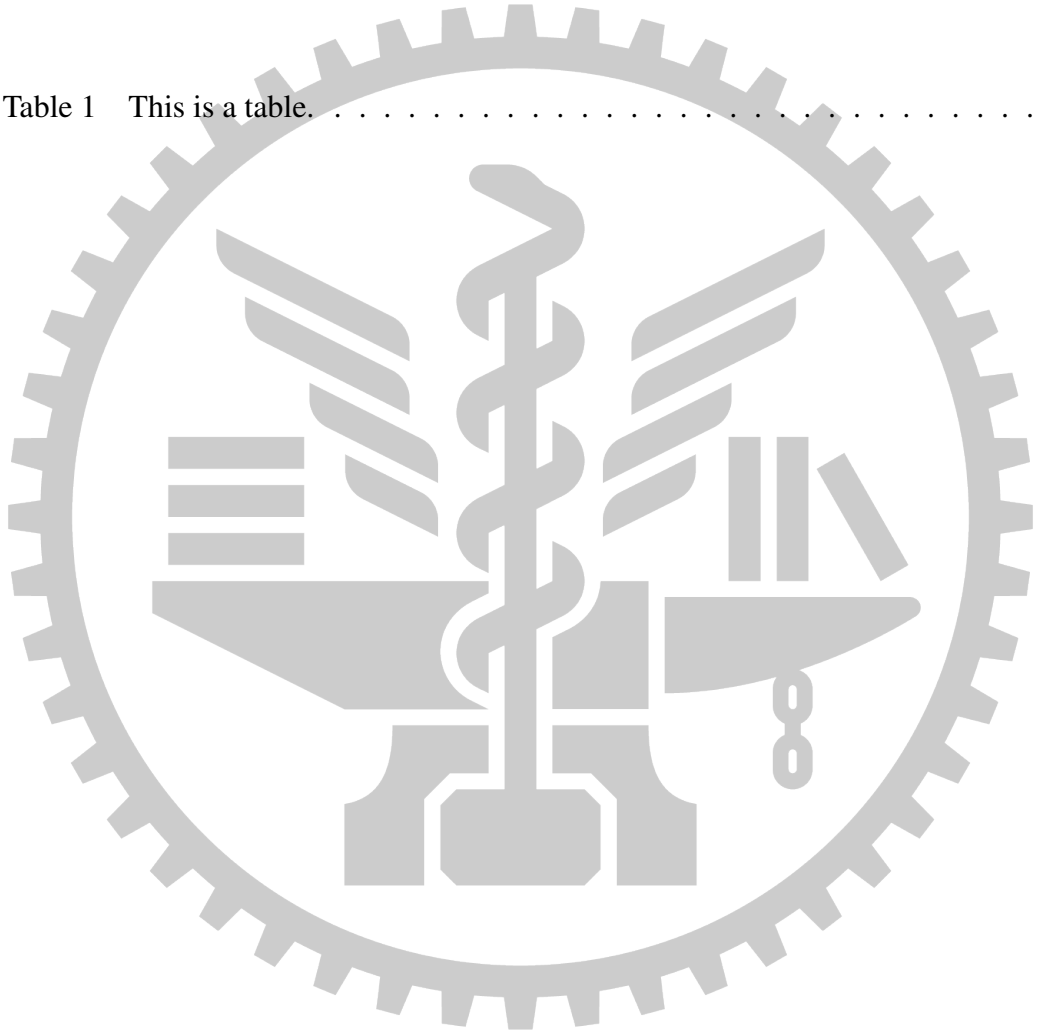
Figure 2 PDF圖檔範例. . . . . 5

Figure 3 PNG example. . . . . 6

Figure 4 Three simple graphs . . . . . 7

# List of Tables

Table 1 This is a table. . . . . 3



# Chapter 1. Introduction

內文可以直接打中文, 也可以寫英文. 學校有買英文學術寫作引導工具Writefull, 軟體功能有: (1)依照論文章節用途，提供句型建議、用語比較、論文用字建議等，並依使用比例提供不同選擇。(2)修正文法與標點符號的誤用。(3)偵測及提醒是否需要加註引用文獻。(4)可逐步修正或一鍵訂正，並可標記修訂。(5)與Microsoft Word整合，在寫作過程中直接給予建議。(其實overleaf也可以用)

詳情可參考: https://www.lib.nycu.edu.tw/custom?menu=125&cid=411

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.

# Chapter 2. 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

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).

# Chapter 3. 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, wikibook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.

Table 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

Figure 1: Excel2LaTeX.

# Chapter 4. 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JPG, PNG, 還有SVG (新版才有, 我用的office 2016沒有這選項QQ). 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. 我個人都是用visio來畫圖, 可是都找不到替代工具, 如果有好用的繪圖工具麻煩分享交流一下QQ 也看過蠻多人用draw.io, 只是這個用起來不太順手. orz 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

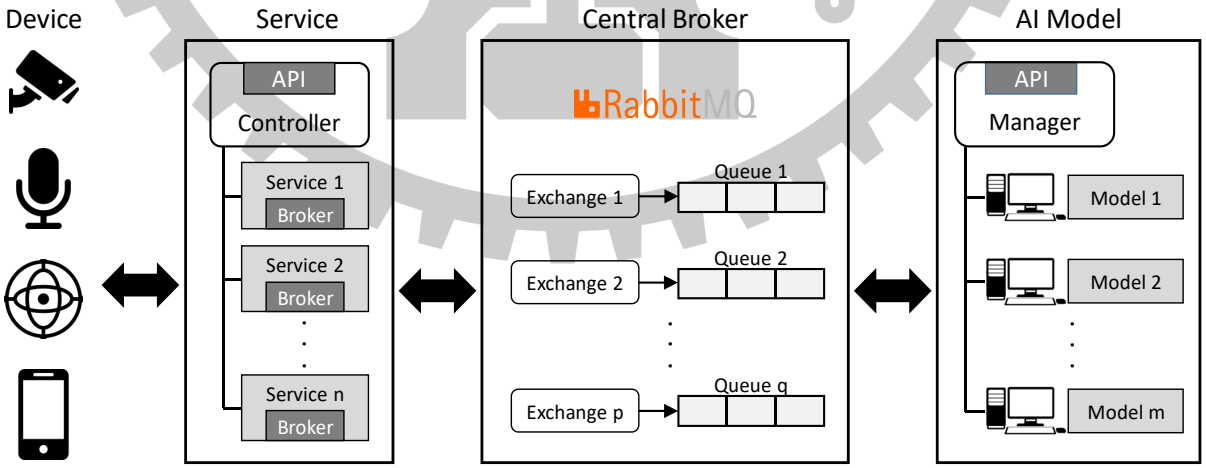



Figure 2: PDF圖檔範例.

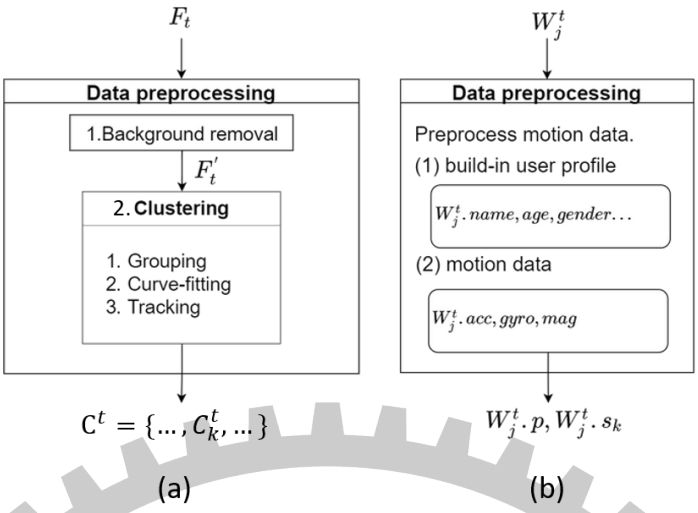



Figure 3: PNG example.

## 4.1 Data Preprocessing

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

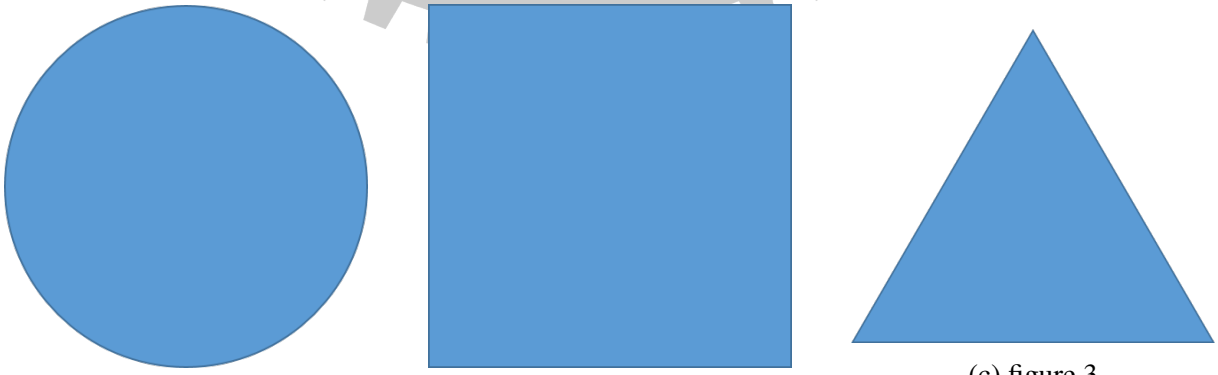
### 4.1.1 2D LiDAR Data

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

# Chapter 5. 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)



(a) figure 1 (b) figure 2 (c) figure 3

Figure 4: Three simple graphs

# Chapter 6. Conclusions

Write your conclusion here.

# References


[1] R. T. Collins *et al.*, "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.

[4] O. M. Parkhi, A. Vedaldi, A. Zisserman *et al.*, "Deep face recognition," in *Proc. British Machine Vision Conference*, vol. 1, no. 3, 2015, p. 6.

[5] M. Goller, C. Feichtenhofer, and A. Pinz, "Fusing rfid and computer vision for probabilistic tag localization," in *Proc. IEEE International Conference on RFID*, 2014, pp. 89–96.

[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.