

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



August 2022  
Taiwan, Republic of China

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誌 謝

謝天謝地



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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

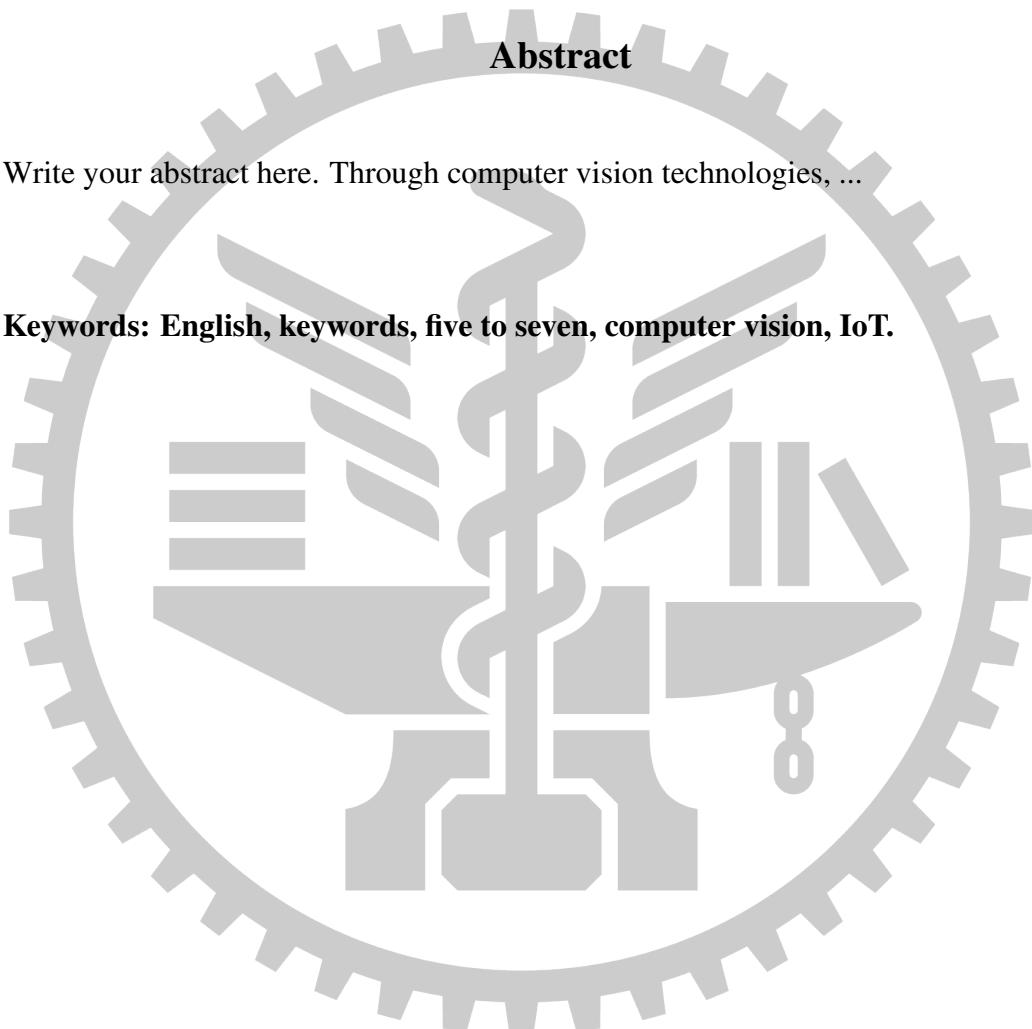
Advisor: Dr. OOOO Tseng

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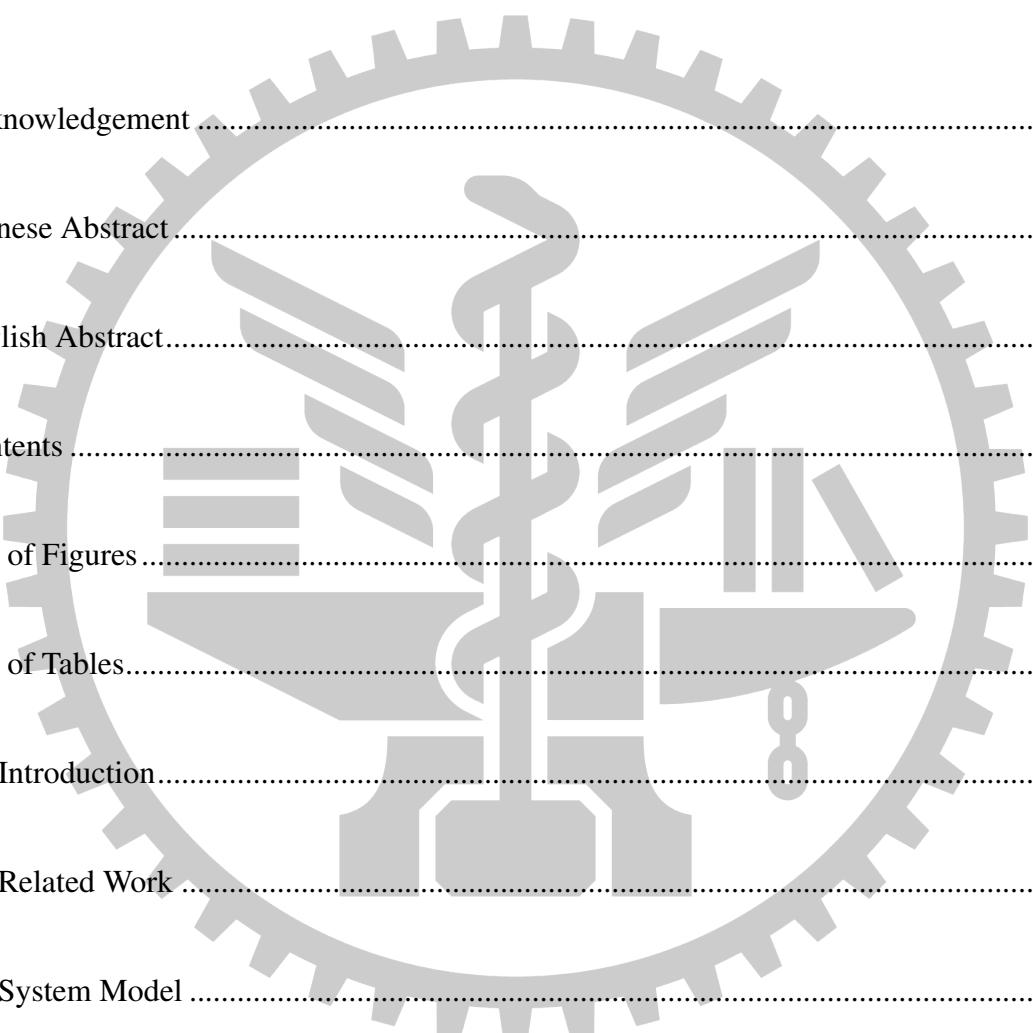
### **Abstract**

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

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



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# 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](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

## 如何製作表格

• 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
$\emptyset$	1 in 1,000	For Swedish names
$\pi$	1 in 5	Common in math
$\$$	4 in 5	Used in business
$\Psi_1^2$	1 in 40,000	Unexplained usage

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.

```

498 Immediately following this sentence is the
499 point at which Table 1 is included in the input file; compare the
500 placement of the table here with the table in the printed output of this document.
501 % t: top, b: bottom, h: here
502 \begin{table}[t]
503 \caption{Frequency of Special Characters}
504 \label{tab:freq}
505 \begin{tabular}{ccl}
506 Non-English or Math&Frequency&Comments\\
507 \midrule
508 \emptyset & 1 in 1,000& For Swedish names\\
509 \$\pi\$ & 1 in 5& Common in math\\
510 \$\$ & 4 in 5 & Used in business\\
511 \$\Psi_1^2\$ & 1 in 40,000& Unexplained
512 usage\\
513 \end{tabular}
514 \end{table}

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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 *L<sup>A</sup>T<sub>E</sub>X 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

现有的增益集:

- Excel2LaTeX
- Solver Add-In
- 分析工具箱

Excel2LaTeX

取消 確定

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 框住表格範圍  
2 點擊增益集  
3 點擊增益集  
4 顯示生成的 LaTeX 語法  
5 點擊 Copy to Clipboard

Is the selected range converted to LaTeX?  工作表1

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1 \begin{table} generated by Excel2LaTeX from sheet "工作表1"
2   \begin{tbl_struct}
3     \tbl_header{2}
4     \tbl_info{1}{2}{2}{2}{2}
5     \tbl_r cells="2" ix="1" maxcspan="1" maxrspan="1" usedcols="2">
6       \tbl_c cells="2" ix="1" maxcspan="1" maxrspan="1" usedcols="2">
7         \tbl_r cells="2" ix="1" maxcspan="1" maxrspan="1" usedcols="2">
8           \tbl_c text="C1" ix="1" maxcspan="1" maxrspan="1" usedcols="1">
9           \tbl_c text="C2" ix="2" maxcspan="1" maxrspan="1" usedcols="1">
10          \tbl_c text="C3" ix="3" maxcspan="1" maxrspan="1" usedcols="1">
11        \tbl_r cells="2" ix="2" maxcspan="1" maxrspan="1" usedcols="2">
12          \tbl_c text="R1" ix="1" maxcspan="1" maxrspan="1" usedcols="1">
13          \tbl_c text="1" ix="2" maxcspan="1" maxrspan="1" usedcols="1">
14          \tbl_c text="-7" ix="3" maxcspan="1" maxrspan="1" usedcols="1">
15          \tbl_c text="3" ix="4" maxcspan="1" maxrspan="1" usedcols="1">
16        \tbl_r cells="2" ix="3" maxcspan="1" maxrspan="1" usedcols="2">
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19          \tbl_c text="100" ix="3" maxcspan="1" maxrspan="1" usedcols="1">
20          \tbl_c text="0.1" ix="4" maxcspan="1" maxrspan="1" usedcols="1">
21      \tbl_r cells="2" ix="4" maxcspan="1" maxrspan="1" usedcols="2">
22        \tbl_c cells="2" ix="1" maxcspan="1" maxrspan="1" usedcols="2">
23          \tbl_r cells="2" ix="1" maxcspan="1" maxrspan="1" usedcols="2">
24            \tbl_c text="1" ix="1" maxcspan="1" maxrspan="1" usedcols="1">
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26          \tbl_r cells="2" ix="2" maxcspan="1" maxrspan="1" usedcols="2">
27            \tbl_c text="3" ix="1" maxcspan="1" maxrspan="1" usedcols="1">
28            \tbl_c text="4" ix="2" maxcspan="1" maxrspan="1" usedcols="1">
29        \tbl_r cells="2" ix="3" maxcspan="1" maxrspan="1" usedcols="2">
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31          \tbl_c text="6" ix="2" maxcspan="1" maxrspan="1" usedcols="1">
32        \tbl_r cells="2" ix="4" maxcspan="1" maxrspan="1" usedcols="2">
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35        \tbl_r cells="2" ix="5" maxcspan="1" maxrspan="1" usedcols="2">
36          \tbl_c text="9" ix="1" maxcspan="1" maxrspan="1" usedcols="1">
37          \tbl_c text="10" ix="2" maxcspan="1" maxrspan="1" usedcols="1">
38      \tbl_r cells="2" ix="6" maxcspan="1" maxrspan="1" usedcols="2">
39        \tbl_c text="11" ix="1" maxcspan="1" maxrspan="1" usedcols="1">
40        \tbl_c text="12" ix="2" maxcspan="1" maxrspan="1" usedcols="1">
41      \tbl_r cells="2" ix="7" maxcspan="1" maxrspan="1" usedcols="2">
42        \tbl_c text="13" ix="1" maxcspan="1" maxrspan="1" usedcols="1">
43        \tbl_c text="14" ix="2" maxcspan="1" maxrspan="1" usedcols="1">
44    \tbl_struct_end
45  \end{table}
46 
```

Options

- Auto-apply options
- Booktabs package
- Comment \$ \\_\\_ \$
- Create table environment
- Extra indent
- Min cell

Copy to Clipboard Save to File 工作表1 Close

50

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](https://www.overleaf.com/learn/latex/Inserting_Images)

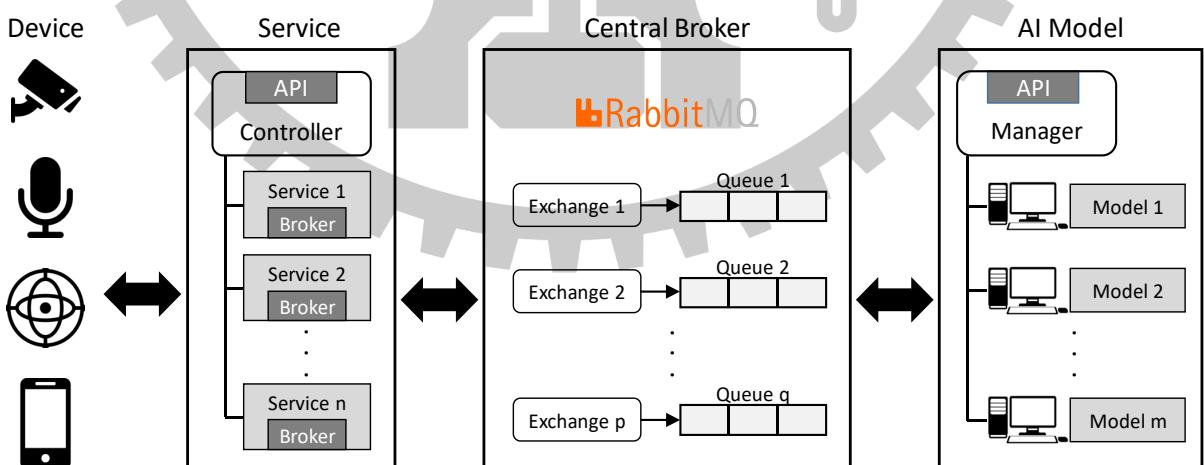


Figure 2: PDF圖檔範例。

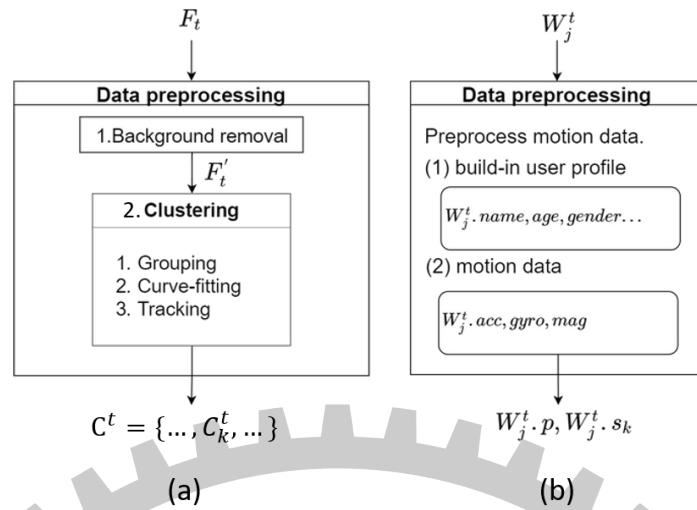


Figure 3: PNG example.

## 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



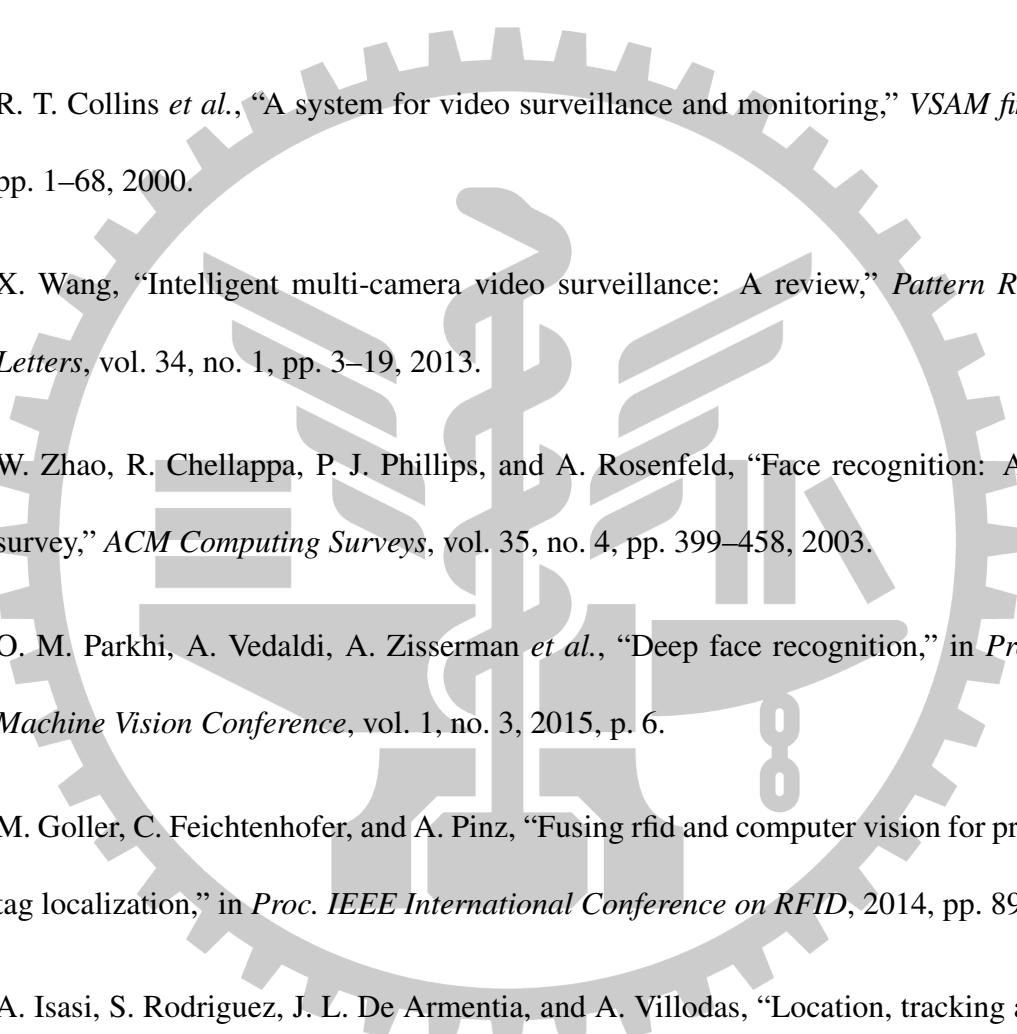
Figure 4: Three simple graphs

# **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.

