澳門城市大學
Universidade da Cidade de Macau
City University of Macau

Bachelor of Computer Science

Bachelor's Thesis

English Thesis Title

Subtitle if applicable

Name : Student Name

Student No. : Student Number

Faculty : Faculty Placeholder

Program : Bachelor of Computer Science

Supervisor : Supervisor Name

Email : student.number@cityu.edu.mo

Month Day, Year

[Individual Format] (Indicator Only)

Approval of Bachelor's Thesis

Note: The approval form signed by the defense committee and supervisor will be attached here after the oral defense.

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論文/報告原創聲明

DECLARATION FOR ORIGINALITY OF THESIS/REPORT

論 文 題 目 ：
Thesis Title _____

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聲明

本團隊特此聲明，所呈交的論文/報告為本團隊在導師指導下進行的工作及取得的成果的最終版。除了論文/報告中按正確引用系統引用來源出處的資料外，論文/報告不含其他人已經發表或撰寫過的成果；本論文/報告的全部或部分未曾在同一學位或其他學位中提交過。

本團隊已知悉本校的《學生學術誠信政策》及《澳門城市大學學生紀律規章》及瞭解本聲明的法律後果由團隊承擔。

Declaration

Our team hereby declare that the submitted thesis/report is the final version, which is composed and accomplished under the guidance of our supervisor. Except for the data adequately cited and referenced in the thesis/report, it does not contain any previously published or written research results by others. This thesis/report, or parts of this thesis/report, has not been previously submitted for the same degree or for a different degree.

Our team are aware of City University of Macau's "Student Ethics Policy" and "Student Disciplinary Regulations of City University of Macau". We understand that we bear the legal consequences of this declaration.

學 院 ：	數據科學學院	課 程 ：	計算機科學學士學位課程
Faculty	Faculty of Data Science	Programme	Bachelor of Computer Science Programme

學生簽名：
Signature of Students _____

日 期 ：
Date _____

Acknowledgements

Upon the completion of this thesis/report, I would like to express my sincere gratitude to my supervisor, teachers, classmates, family, and all those who provided guidance and support throughout the research and writing process.

This section may be replaced with the student's own acknowledgements.

Student Name
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Abstract

Input abstract here. The abstract should concisely summarize the research background, objectives, methodology, results, and conclusions of the thesis/report.

Key Words: data science; artificial intelligence; machine learning; thesis template; keyword

Contents

List of Figures

List of Tables

Chapter 1 Introduction

1.1 Background and Significance

The introduction should describe the background, necessity, and research questions of the thesis/report. It should clarify the current problems, the motivation of the study, the research objectives, and the distinction between previous work and the student's own contribution.

This template uses BibTeX references managed through `ref.bib`; for example, a citation can be written as [1].

1.1.1 Topic Background

Each figure should have a figure number and title. The caption should be placed below the figure, and the figure should appear after it is mentioned in the text. An example is shown in Figure 1-1.

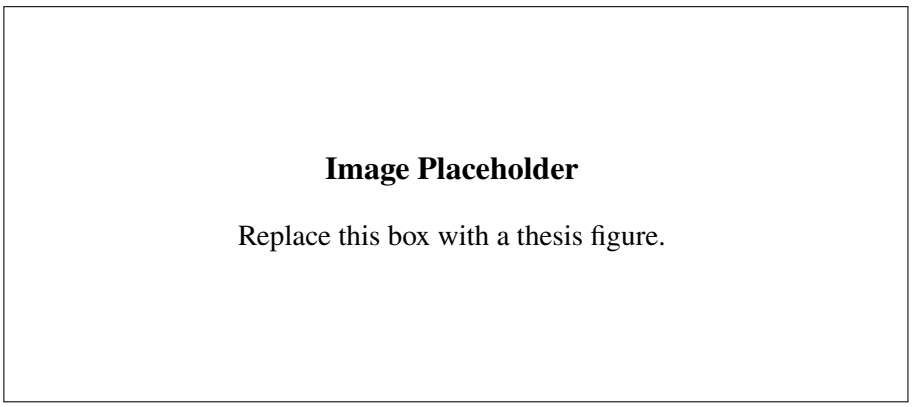

Figure 1-1 Format requirements for figures in the thesis/report

Chapter 2 Framework for Pedestrian Detection

2.1 Feature Extraction

Notes may be presented as footnotes or chapter endnotes according to the common practice of the discipline. Sources, permissions, and explanatory notes should be cited clearly and consistently.

2.1.1 HOG Features

Each table should have a table number and title. The caption should be placed above the table, and the table should appear after it is mentioned in the text. Table 2-1 gives a sample table.

Table 2-1 Effect information of detection videos

Video Sequence	Frame Size	Avg. Detection Time	Avg. Accuracy
Video 1	640 x 480	62 ms/frame	93.3%
Video 2	640 x 480	65 ms/frame	92.7%
Video 3	320 x 240	44 ms/frame	94.1%

Chapter 3 Implementation of Machine Learning Algorithms in Embedded Systems

3.1 Embedded Platform Introduction

When abbreviations are used in the main text, the full term should be provided at the first occurrence. Abbreviations should generally be avoided in titles unless they are widely recognized in the discipline.

3.1.1 Mathematical Formulas

Equations should be numbered by chapter. The following examples demonstrate this format:

$$S(m,n) = \sum_{0 \le i < m} Y_i \tag{3-1}$$

$$r(s) = \begin{cases} a_u g_s b_u, & \text{if } s > 1, \\ a_d g_s b_d, & \text{otherwise.} \end{cases} \tag{3-2}$$

Chapter 4 Innovative Algorithm Method 1

4.1 Algorithm Design and Implementation

Input the design objective, assumptions, workflow, and implementation details of the first innovative method here.

4.1.1 Algorithm Introduction

Input the theoretical basis, main steps, and expected advantages of the algorithm here.

Chapter 5 Innovative Algorithm Method 2

5.1 Algorithm Design and Implementation

Input the design objective, assumptions, workflow, and implementation details of the second innovative method here.

5.1.1 Algorithm Introduction

Input the theoretical basis, main steps, and expected advantages of the algorithm here.

Chapter 6 Fast Pedestrian Detection Algorithm Based on Machine Learning

6.1 Multi-Channel Feature Extraction

Input the content of this section here.

6.1.1 Gradient Features

Input the content of this subsection here.

6.1.2 Color Features

Input the content of this subsection here.

6.2 Feature Calculation Algorithm

Input the content of this section here.

6.3 Pedestrian Detection Algorithm Based on Multi-Instance Learning

Input the content of this section here.

6.4 Experimental Results and Analysis

Input the content of this section here.

6.5 Chapter Summary

Input the content of this section here.

Chapter 7 Summary and Outlook

7.1 Summary

Input the summary of the research work, main findings, and contributions here.

7.2 Outlook

Input limitations, future improvements, and potential research directions here.

References

[1] LECUN Y, BENGIO Y, HINTON G. Deep learning[J]. nature, 2015, 521(7553): 436-444.

Author's Resume

Education

- Year–Year: Bachelor of Computer Science, City University of Macau.

Work Experience

- Input work experience here, if applicable.

Publications and Achievements during the Program

- Input publications, awards, projects, or completed work here.

Appendix

Place source code, detailed data tables, questionnaires, supplementary proofs, or other supporting materials here.