

# 國立交通大學

## 資訊科學與工程研究所

### 碩士論文

基於卷積神經網路的論文自動生成技術

A CNN-based Automatic Thesis Generation Technique



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中華民國 106 年 9 月

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碩士論文

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# 基於卷積神經網路的論文自動生成技術

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## 摘 要

在大 AI、ML 時代，自己寫論文已經不再是個有效率的做法，因此我們提出了一套基於卷積神經網路的論文自動生成技術。

關鍵字：卷積神經網路、機器學習



# A CNN-based Automatic Thesis Generation Technique

Student : Ta-Ming Wang

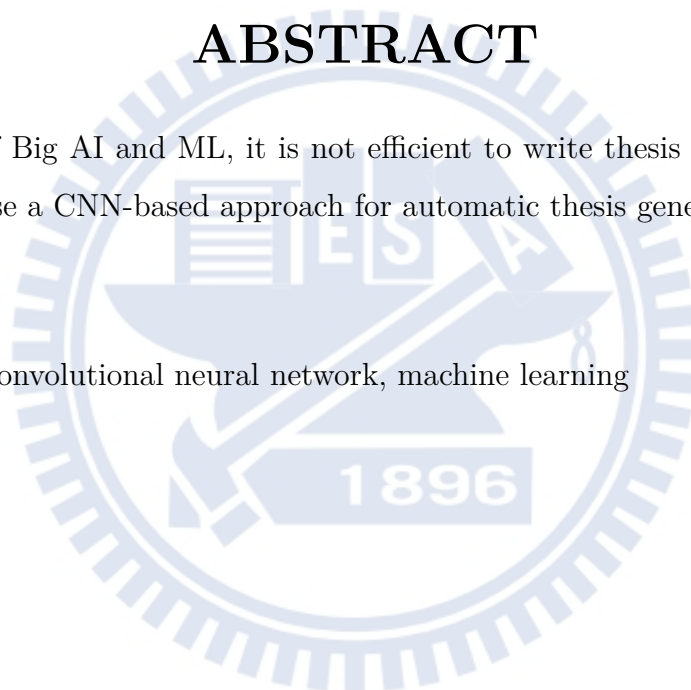
Advisor : Dr. Xiao-Sung Wu

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## ABSTRACT

In the era of Big AI and ML, it is not efficient to write thesis by yourself anymore so that we propose a CNN-based approach for automatic thesis generation.

Keywords: convolutional neural network, machine learning



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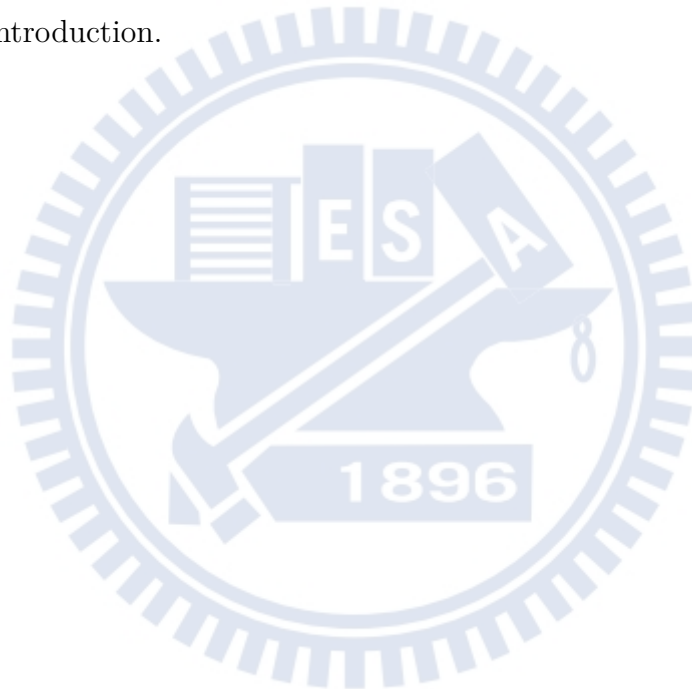
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# Chapter 1

## Introduction

Here is the introduction.

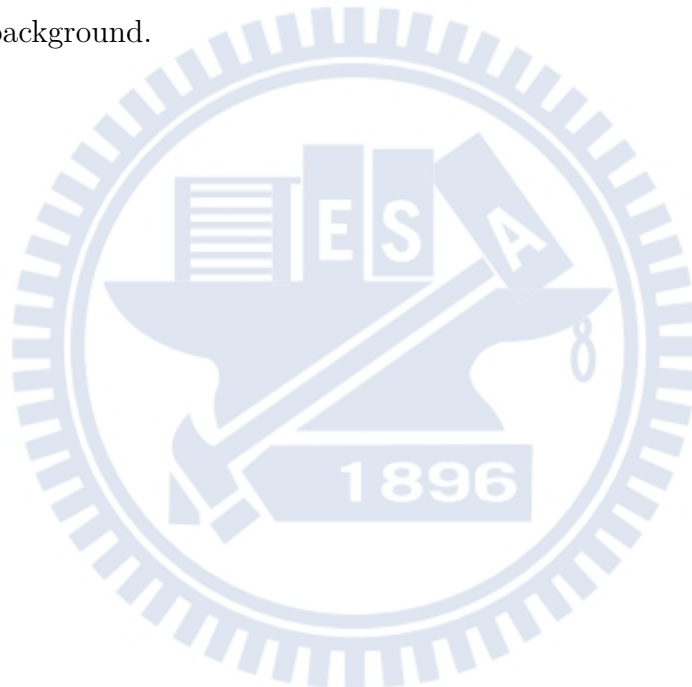




# Chapter 2

## Background

Here is the background.



# Chapter 3

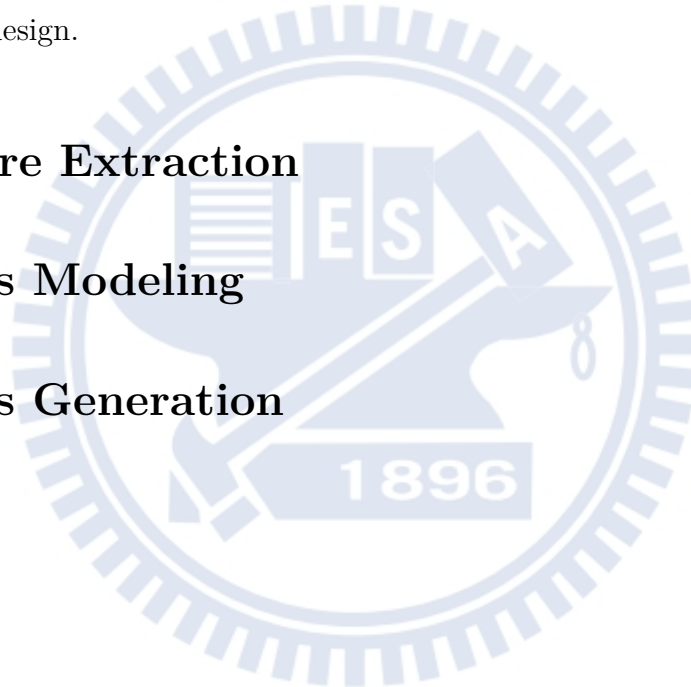
## Design

Here is the design.

### 3.1 Feature Extraction

### 3.2 Thesis Modeling

### 3.3 Thesis Generation



# Chapter 4

## Implementation

We implement the prototype on TensorFlow[1] platform. Figure 1 shows the logo of TensorFlow.

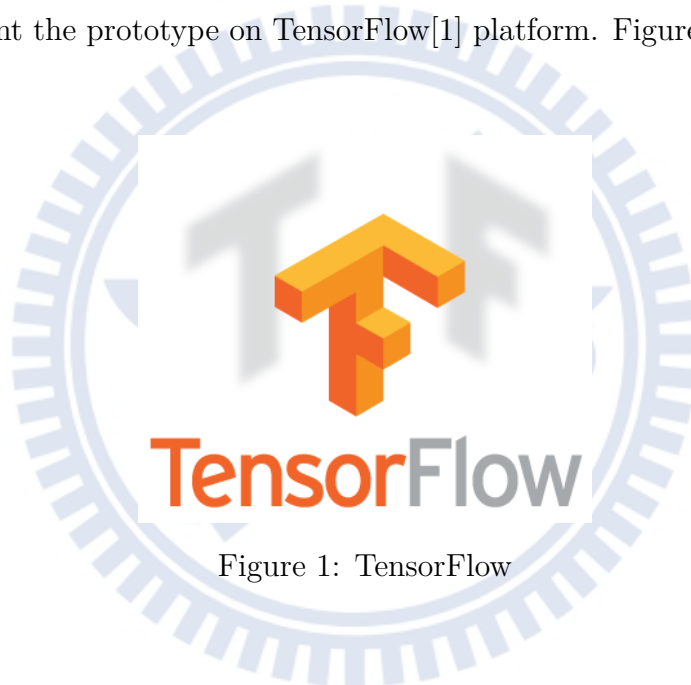


Figure 1: TensorFlow

# Chapter 5

## Evaluation

Here is the evaluation.

### 5.1 Datasets

### 5.2 Experiment Design

### 5.3 Experimental Results

Table 1 lists the training time of different datasets.

Table 1: Training Time

Dataset	Training Time
A	2 min
B	4 min
C	8 min
D	16 min
E	32 min

### 5.4 Case Studies

# Chapter 6

## Related Work

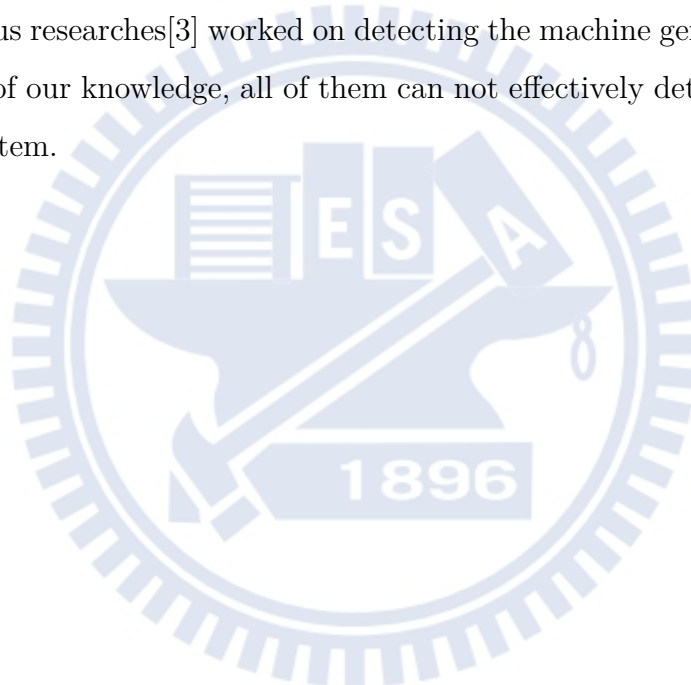
Here are the related works[2].



# Chapter 7

## Discussion

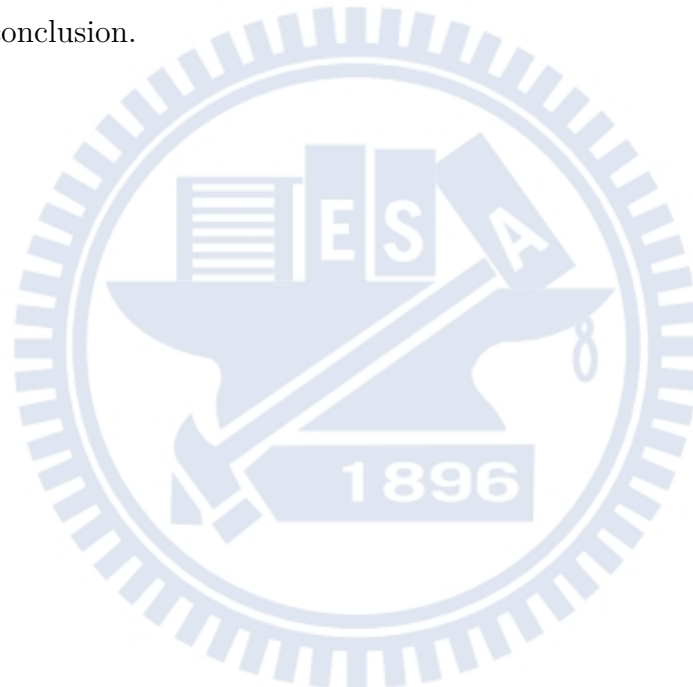
Some previous researches[3] worked on detecting the machine generated paper. However, to the best of our knowledge, all of them can not effectively detect the thesis generated with our system.



# Chapter 8

## Conclusion

Here is the conclusion.



# References

- [1] *TensorFlow*. URL: <https://pdos.csail.mit.edu/archive/scigen/>.
- [2] MIT CSAIL. *SCIgen - An Automatic CS Paper Generator*. URL: <https://pdos.csail.mit.edu/archive/scigen/>.
- [3] Jiping Xiong and Tao Huang. “An effective method to identify machine automatically generated paper”. In: *Knowledge Engineering and Software Engineering, 2009. KESE'09. Pacific-Asia Conference on*. IEEE. 2009, pp. 101–102.

