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

研　究　生：王大明

指 導 教 授：吳小松　教授

中華民國 106 年 9 月

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學生　：王大明
指導教授　：吳小松　博士

國立交通大學資訊科學與工程研究所碩士班

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

Institute of Computer Science and Engineering
National Chiao Tung University

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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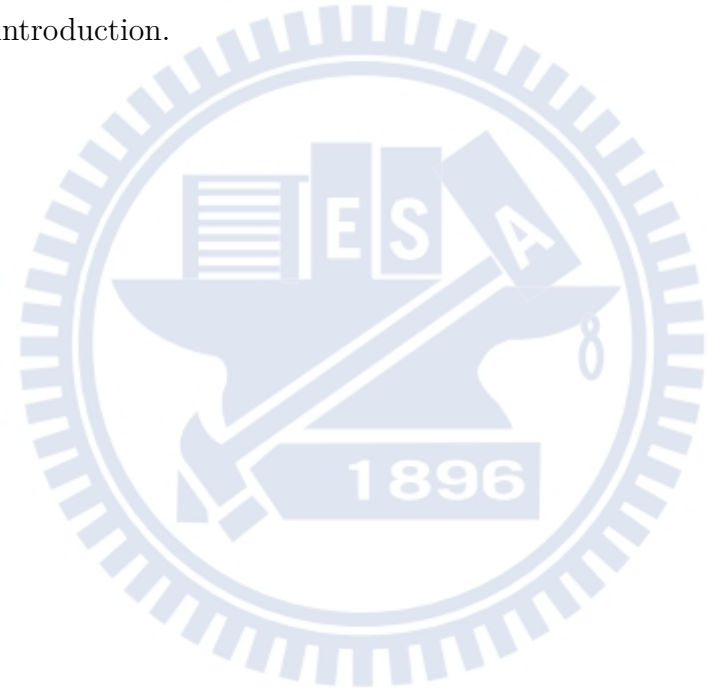
Chapter 1

Introduction

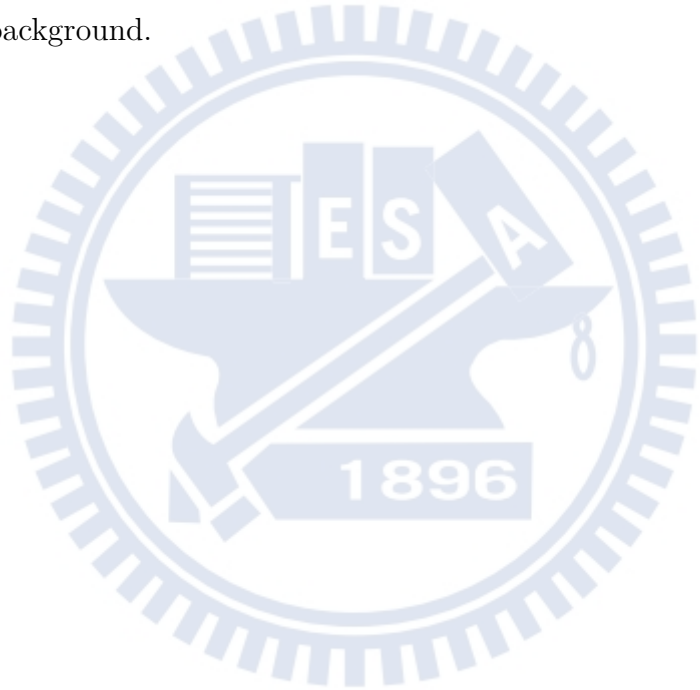
Here is the introduction.



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.

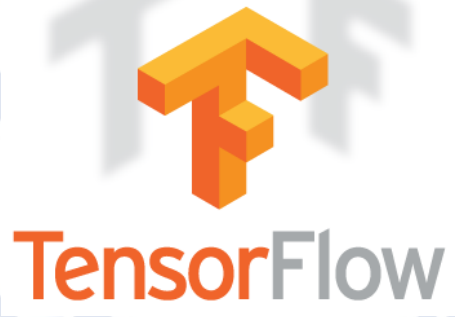


Figure 1: TensorFlow

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

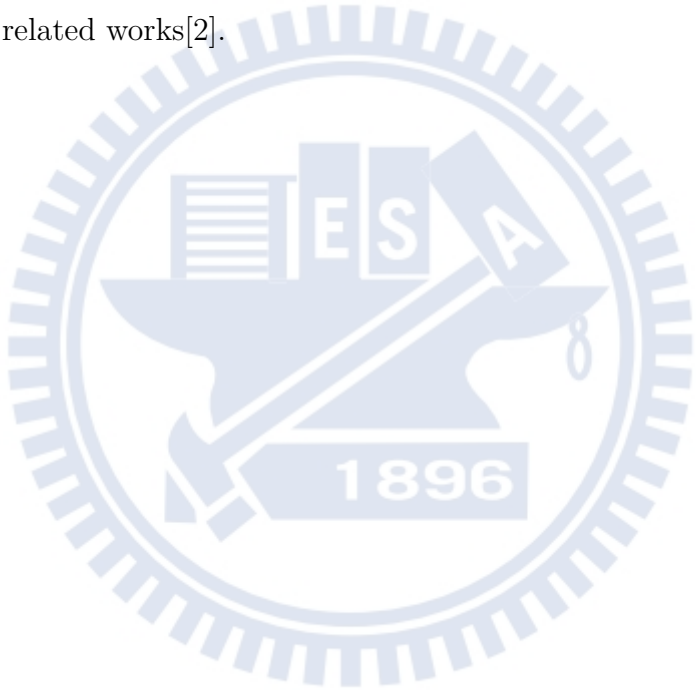
Dataset	Training Time
A	2 min
B	4 min
C	8 min
D	16 min
E	32 min

5.4 Case Studies

Chapter 6

Related Work

Here are the related works[2].



Chapter 7

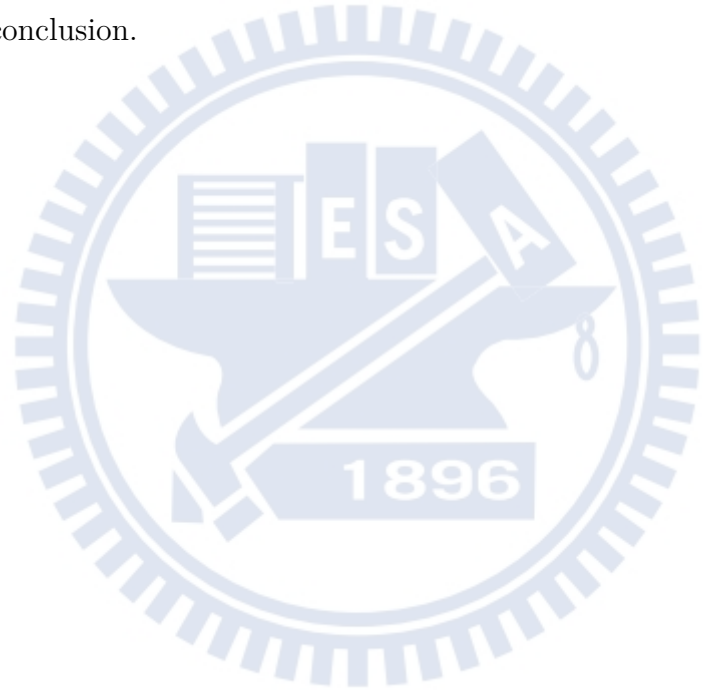
Discussion

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.