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

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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

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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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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.