



L^AT_EX THESIS TEMPLATE: AN UNOFFICIAL VERSION α -0.1

AUTHOR NAME

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Vidyasirimedhi Institute of Science and Technology approved this thesis as a partial fulfillment of the requirements for the degree of Doctor of Philosophy in Information Science and Technology.

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L^AT_EX Thesis Template: An Unofficial Version α -0.1

Abstract

Author Name

My abstracts

Keywords: My keyword No. 1, My keyword No. 2, My keyword No. 3, My keyword No. 4, My keyword No. 5.

Acknowledgment

I wish to express my greatest gratitude to my advisor.

Author Name
10 October 2023

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List of Abbreviations

EEG	Electroencephalogram
MI	Motor Imagery
CNN	Convolutional Neural Network
H ₂ O	Water
DBU	1,8-Diazabicyclo [5.4.0]-7-Undecene

Chapter 1

Introduction

1.1 Motivating Problem

This is the research motivation

1.2 Contributions

This thesis makes the following key contributions:

- We introduce a novel experimental paradigm.
- We propose a novel algorithm.

1.3 Outline

This thesis is divided into three major parts.

Chapter 2: This chapter provides a comprehensive background

Chapter 3: This chapter investigates

Chapter 4: This chapter investigates

Chapter 5: This chapter summarizes the key findings and contributions of the thesis

Appendix A: This appendix provides additional details on the experimental setup and data analysis methods used in this thesis.

Chapter 2

Background

2.1 Heading

The chapter headings should be 14 points and any other titles should be in 12 points. The text in the chapter body should be computer printed in 12 points Times New Roman font.

2.1.1 Sub-heading 1

Typing should be with a spacing of 1.5 between lines, including the List of References and Appendices.

2.1.1.1 Sub-heading 2

Subheading 2 provides an example of items presented in an enumerated list.

- 1) Enumerate One
- 2) Enumerate Two
- 3) Enumerate Three

2.2 Equation

As an illustration of L^AT_EX's mathematics formatting, Equation 2.1 is the definition of *Rényi entropy* and Equation 2.2 is the total loss function:

$$H_{\alpha}(X) = \frac{1}{1-\alpha} \log \left(\sum_{x \in X} P[X=x]^{\alpha} \right). \quad (2.1)$$

$$\mathcal{L}_{\text{total}} = \frac{1}{N} \sum_{i=1}^N \{w_i \mathcal{L}_i\}. \quad (2.2)$$

2.3 Algorithm

This is an example of Algorithm 2.1.

Algorithm 2.1 An algorithm with caption.

Require: $n \geq 0$

Ensure: $y = x^n$

```

1:  $y \leftarrow 1$ 
2:  $X \leftarrow x$ 
3:  $N \leftarrow n$ 
4: while  $N \neq 0$  do
5:   if  $N$  is even then
6:      $X \leftarrow X \times X$ 
7:      $N \leftarrow \frac{N}{2}$ 
8:   else if  $N$  is odd then
9:      $y \leftarrow y \times X$ 
10:     $N \leftarrow N - 1$ 
11:   end if
12: end while
```

► This is a comment

2.4 Table

LaTeX table generators, such as TablesGenerator.com¹, can help you easily create well-formatted tables. Here, Table 2.1 is an example of a table generated using the tool.

Table 2.1 Classification performance. An asterisk (*) indicates values that are significantly different from the others ($p < 0.05$).

Comparison Model	Subject-independent	
	Accuracy \pm SD	F1-score \pm SD
FBCSP-SVM	64.96 \pm 12.70	65.25 \pm 15.14
Deep Convnet	68.33 \pm 15.33	70.20 \pm 15.18
EEGNet-8,2	68.84 \pm 13.87	70.39 \pm 14.30
Spectral-Spatial CNN	68.27 \pm 13.56	65.86 \pm 17.37
MIN2Net	72.03 \pm 14.04*	72.62 \pm 14.14*

¹<https://www.tablesgenerator.com/>

2.5 Figure

Here are the example of Figure 2.1 and Figure 2.2.

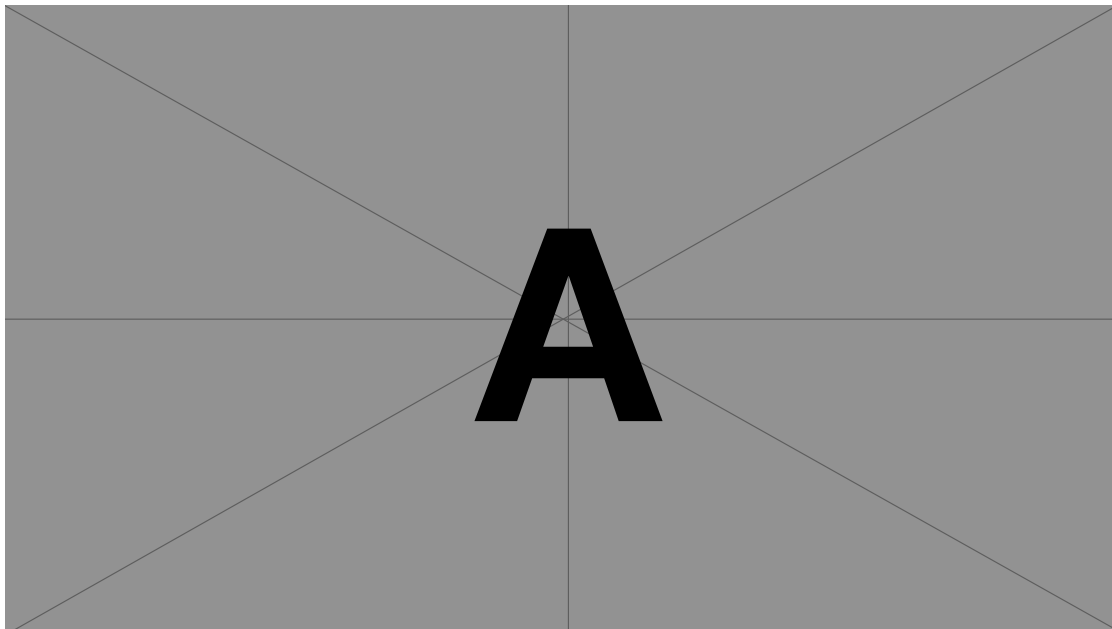


Figure 2.1 This is the example of very long caption of images. For the figure caption which contains more than 1 line, it should align left throughout the thesis. The second and other lines need to be aligned with the first letter of the first line.

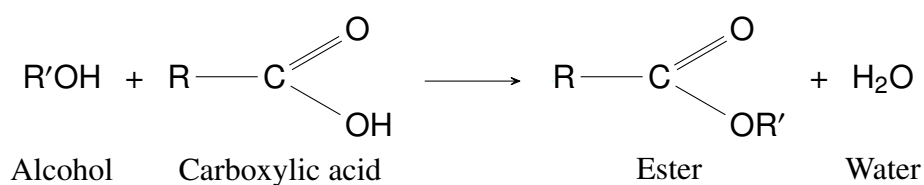


Figure 2.2 The caption on this figure.

2.6 Citation

This is an example of how to cite previous work, such as [1], or multiple sources like [2–4]. Ensure that the corresponding BibTeX entries are added to the bibliography.bib file before citing.

Below is an example BibTeX entry:

```
@ARTICLE{dummy2022example,
```

```
author = {Doe, John and Smith, Jane and Roe, Richard},
journal = {Journal of Example Studies},
title = {A Dummy Title for Demonstration Purposes},
year = {2022},
volume = {42},
number = {1},
pages = {1--10}
}
```

2.7 Footnote

I'm writing to test the `\footnotemark` and `\footnotetext` commands. You can insert a footnote marker using the `\footnotemark2` command and later, when you're ready, typeset the footnote text by writing `\footnotetext{Here's the footnote.}`.

Let's do one more to see the result³ which I'll comment on within the footnote.

²Here's the footnote.

³Specifically, I'd write comments in this one.

Chapter 3

Investigation 1

3.1 Section 1

This section presents

Chapter 4

Investigation 2

4.1 Section 1

This section presents

Chapter 5

Conclusion

The conclusion of this thesis.

References

1. Author O, Author T, and Author F. A Placeholder Title for Demonstration Purposes. **Journal of Placeholder Research** 2022;99(9):100–10.
2. Author A and Author B. **A Dummy Book Title for Example Use**. Fictional Press, 1979.
3. Author F, Author B, and Baz A. Simulated Study on EEG Activity in Hypothetical Conditions. **Journal of Experimental Interfaces** 2020;55(8):8888–99.
4. Author O, Author B, and Author G. Sample Article on Deep Learning for EEG. **Journal of Artificial Neuroscience** 2017;12(4):321–40.

Appendix A

Proofs for Chapter 3

A.1 Proof of Lemma

Author's Biography

Name:	AUTHOR NAME
Date of Birth:	February 19 th , 1993
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Education:	<p>Bachelor of Science in Computer Science, Lorem Ipsum University, Bangkok, Thailand (2011-2014)</p> <p>Master of Science in Computer Science, Lorem Ipsum University, Bangkok, Thailand (2015-2017)</p>
Scholarship:	Recipient of the full scholarship from Vidyasirimedhi Institute of Science and Technology (VISTEC)
Academic Publication:	<p>Author O, Author T, and Author F. A Placeholder Title for Demonstration Purposes. Journal of Placeholder Research 2022;99(9):100–10.</p> <p>Author O, Author B, and Author G. Sample Article on Deep Learning for EEG. Journal of Artificial Neuroscience 2017;12(4):321–40.</p> <p>Author R, Author O, and Author B. A Sample Conference Paper on Face Recognition. In: Proceedings of the International Conference on Vision Research. 2015:101–10.</p>