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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY
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Abstract

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Keywords: Brain-computer interfaces (BCIs), Motor imagery (MI), Multi-task learning, Deep metric learning (DML), Autoencoder (AE).

Acknowledgment

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Author Name
10 October 2023

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List of Abbreviations

EEG	Electroencephalogram
MI	Motor Imagery
CNN	Convolutional Neural Network
LOREM	Lorem ipsum dolor sit amet, consectetuer adipiscing elit.
H_2O	Water
DBU	1,8-Diazabicyclo [5.4.0]-7-Undecene

Chapter 1

Introduction

1.1 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.

1.1.1 Sub-heading 1

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

1.1.1.1 Sub-heading 2

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

1.2 Algorithm

This is an example of Algorithm 1.1.

1.3 Equation

As an illustration of LaTeX's mathematics formatting, Equation 1.1 is the definition of *Rényi entropy* and Equation 1.2 is the total loss function:

Algorithm 1.1 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: $N \leftarrow \frac{N}{2}$ ▷ This is a comment
8: **else if** N is odd **then**
9: $y \leftarrow y \times X$
10: $N \leftarrow N - 1$
11: **end if**
12: **end while**

$$H_\alpha(X) = \frac{1}{1-\alpha} \log \left(\sum_{x \in \mathcal{X}} P[X = x]^\alpha \right). \tag{1.1}$$

$$\mathcal{L}_{\text{total}} = \frac{1}{N} \sum_{i=1}^{N} \{ w_i \mathcal{L}_i \}. \tag{1.2}$$

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Chapter 2

Objectives

2.1 The table and figure numbers

The table and figure numbers shall represent the chapter numbers. For example, the first table in the Chapter 2 shall be "Table 2.1 .....", etc. The number and title of a table (Table caption) should be placed ABOVE the table and aligned left. The word "Table 2.1" is **bold** font except its caption.

Table 2.1 Classification performance.

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

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Chapter 3

Literature Reviews

3.1 Figure

The figure numbers shall represent the chapter numbers. For example, the first figure in Chapter 3 shall be “Figure 3.1”, etc. the number and title of a figure (Figure caption) should be placed BELOW the figure. For the figure caption which contains only 1 line, it should align CENTER throughout the thesis. For the figure caption which contains more than 1 line, it should align left throughout the thesis. The figure format should be pdf, png, jpg or \chemfig as Figure 3.2

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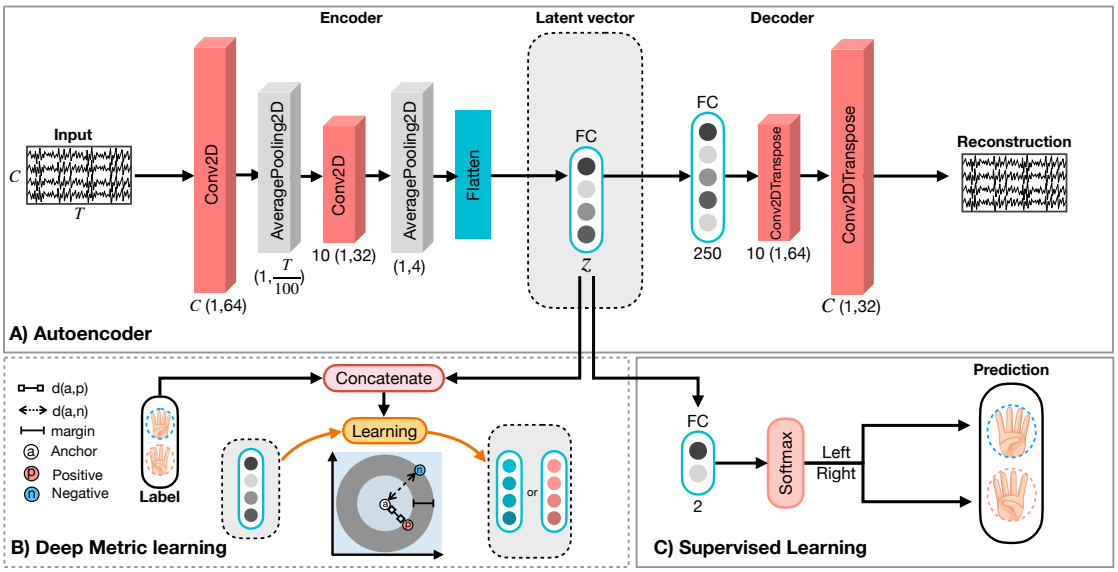

Figure 3.1 long caption: The MIN2Net model architecture. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

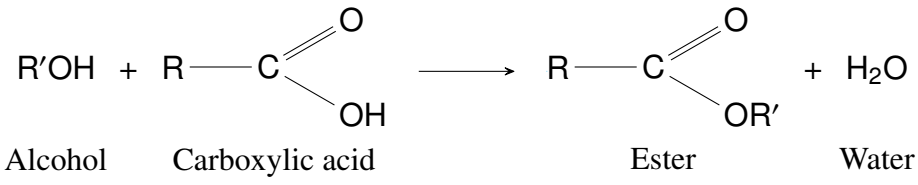

Figure 3.2 The caption on this figure, the second and other lines need to be aligned with the first letter of the first line.

Chapter 4

Materials and Methods

4.1 Citation

This citation follows the VISTEC Vancouver Style. Please copy the *BibTeX* format to *bibliography.bib* file then cite those works using \ cite {id} as the example here [1–5] and [6].

Chapter 5

Results and Discussion

5.1 Lorem Ipsum

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum

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Academic Publication:	XXXXXX X, Shamsi SA. Combination of Chiral Capillary Electrochromatography with Electrospray Ionization Mass Spectrometry: Method Development and Assay of Warfarin Enantiomers in Human Plasma. **Anal Chem.** 2000;75(22):6295-305. XXXXXX X, YYYYYY Y. Combination of Chiral Capillary Electrochromatography with Electrospray Ionization Mass Spectrometry: Method Development and Assay of Warfarin Enantiomers in Human Plasma. **Anal Chem.** 2000;75(22):6295-305.