DAC I Report

on

Proposed Broad or Specific Thesis Title

by

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CERTIFICATE FOR 1st DAC

Title of the Proposed Thesis

"Proposed Broad or Specific Thesis Title"

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Contents

List of Figures

List of Tables

Abbreviations

CNN	**C**onvolutional **N**eural **N**etwork
RNN	**R**ecurrent **N**eural **N**etwork
GCN	**G**raph **C**onvolutional **N**etwork
FCN	**F**ully **C**onnected **N**etwork

Chapter 1

Introduction

1.1 Lists in LaTeX

1.1.1 Ordered Lists

This is how you make an ordered i.e., numbered list in LaTeX:

1. Nemo enim ipsam voluptatem quia voluptas
2. sit aspernatur aut odit aut fugit
3. sed quia consequuntur magni dolores eos qui ratione

1.1.2 Unordered Lists

A simple unordered list with default circular bullets:

- Sed ut perspiciatis unde omnis iste natus error sit
- voluptatem accusantium doloremque laudantium

This is how you make the bullets simply square!

- totam rem aperiam, eaque ipsa quae ab illo
- inventore veritatis et quasi architecto beatae
- vitae dicta sunt explicabo

How about an unordered list with coloured square bullets?

- Nemo enim ipsam voluptatem quia voluptas
- sit aspernatur aut odit aut fugit
- sed quia consequuntur magni dolores eos qui ratione

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

1.1.3 Nested Lists

1. (a) At vero eos et accusamus et iusto odio
   (b) voluptatum deleniti atque corrupti
2. dignissimos ducimus qui blanditiis praesentium
3. id est laborum et dolorum fuga
   (a) quos dolores et quas molestias excepturi sint
   (b) i. occaecati cupiditate non provident
   ii. similique sunt in culpa qui o cia deserunt mollitia animi

1.2 Equations in LaTeX

You may use an inline formula like this: $L = f\lambda_1, \lambda_2, \quad , \lambda_{|L|}g$. How do you write a simple equation 1.1?

$$\gamma = f\beta \quad \alpha j 1 \quad \beta \quad n, lg \tag{1.1}$$

Let us try an equation 1.2 with integral...

$$W_{a\to b} = \int_a^b \vec{F} \quad \vec{dr} \tag{1.2}$$

An equation 1.3 with summation...

$$X = \sum_{n=1}^{\infty} \zeta^{-n} \; 8 \; \zeta \; 2 \; \mathbb{R} \tag{1.3}$$

1.2.1 Matrices and Vectors in LaTeX

Matrices and vectors are beautiful, aren't they?

$$X = \begin{bmatrix} x_{11} & & x_{1d} \\ \vdots & \ddots & \vdots \\ x_{n1} & & x_{nd} \end{bmatrix}_{n\times d}, Y = \begin{bmatrix} y_{11} & & y_{1L} \\ \vdots & \ddots & \vdots \\ y_{n1} & & y_{nL} \end{bmatrix}_{n\times L}$$

$$Z = \begin{bmatrix} z_1 \\ \vdots \\ z_n \end{bmatrix}_{n\times 1}, \mathbb{W} = \begin{bmatrix} w_1 & & w_L \end{bmatrix}_{1\times L}$$

Chapter 2

Literature Review

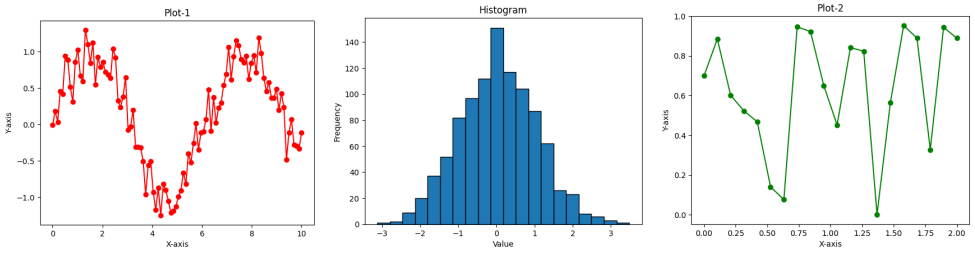
2.1 Figures in LaTeX

Here is an example of using a gure 2.1 and referring to it in your document:

FIGURE 2.1: A picture of CSIR-CMERI passed through a gaussian lter

2.1.1 Multiple Figures

In order to avoid compile timout in Overleaf, try to use images and gures in ***pdf*** format only. You can refer the gures 2.2(a), 2.2(b), and 2.2(c).



(a) Caption1 (b) Caption2 (c) Caption3

FIGURE 2.2: Three gures side-by-side

2.2 Tables in LaTeX

This is an example table in LaTeX. Note that adding an extra `\hline` adds an extra horizontal line, and adding an extra *j* adds an extra vertical line in the table.

TABLE 2.1: A table to demonstrate the beauty of LaTeX

Sample	Parameter_1	Parameter_2	Parameter_3	Parameter_4	Parameter_5
Alpha	0.5	90	67	0.34	23.23
Beta	0.4	82	72	0.55	33.12
Gamma	0.8	76	89	0.67	54.22

The easiest way to generate tables in latex is by creating an equivalent table in MS Word or Excel and copying and pasting the layout in the website: `https://www.tablesgenerator.com/` in the menu: **File ! Load table**. You may also edit the table accordingly in the website.

2.3 Research Gaps

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Excepteur sint occaecat cupidatat non proident, sunt in culpa qui o cia deserunt mollit anim id est laborum.

2.4 Research Objectives

This section is generally presented in point-wise fashion. Start from the most important objective rst and move towards sub-objectives.

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2. Quisque pharetra nisl sit amet feugiat aliquam. Nam ut rhoncus orci. Suspendisse tincidunt urna vitae luctus interdum.
3. Praesent ac nunc quis nisl dignissim egestas. Fusce viverra ullamcorper ligula, vel fringilla ex consectetur eu.
4. Vivamus in velit sed tortor blandit iaculis a at turpis.
5. Aenean auctor hendrerit tellus, at faucibus lectus blandit non. Suspendisse varius odio at nisi commodo, nec pharetra lorem dignissim.

Chapter 3

Research Work

3.1 Citations in LaTeX

Let us cite a paper on Random Forests[1] and SVM[2] like this. Do you see how we use `\cite{}` to cite the bibtex codes stored in the ***Bibliography.bib*** file, for each of the papers above?

Another question is, how do we generate the bibtex codes for our cited papers? **Hint**: you can generate that from `https://scholar.google.com` itself from the menu: ***cite ! BibTeX***, under each paper.

3.2 Algorithms in LaTeX

Algorithms are fundamental to Computer Science. Let us write algorithm 1.

3.3 Some more resources on LaTeX

- `https://en.wikibooks.org/wiki/LaTeX`

Algorithm 1: Some Turing worthy algorithm

Data: D = fx_i, y_ig
Result: $\widehat{y}$
for *every epoch* **do**
  for *8* (x_i, y_i) **do**
    x_i 0 # this is how you comment!
    while $x_i <$ 10 **do**
      y_i y_i + 1
    end
    $\widehat{y}$ y_i
  end
end

- `https://www.learnlatex.org/en/`
- `https://www.overleaf.com/learn`

3.4 Results and Discussion

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3.4.1 Results

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3.4.2 Discussion

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3.5 Conclusion and Future Work

3.5.1 Conclusion

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3.5.2 Future Work

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3.5.3 Dissemination of Work

- Manuscript \Title of your journal/conference manuscript" to be submitted to XYZ journal/conference.
- Lastname T.F. *et al.* \Title of your journal/conference manuscript" ABC journal/conference, (2024).

Bibliography

[1] L. Breiman, \Random forests," *Machine learning*, vol. 45, pp. 5{32, 2001.

[2] C. Cortes and V. Vapnik, \Support-vector networks," *Machine learning*, vol. 20, pp. 273{297, 1995.