

# Thesis Title

by

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## Confirmation Report

Presented as part of the requirements for the degree of  
Doctor of Philosophy

## **Declaration**

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## Acknowledgement

Acknowledgement

## **Abstract**

This document provides a comprehensive overview of the LaTeX template used for generating professional academic papers. It includes sections on formatting, structure, and best practices for creating a well-organized and visually appealing document. This abstract serves as a placeholder to demonstrate where the summary of your work should be placed.

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# Acronyms

**ACM** Association for Computing Machinery

**IEEE** Institute of Electrical and Electronics Engineers



# Chapter 1

## Introduction

If you already know the basics of how to use  $\text{\LaTeX}$  you can skip this and go straight to 2.6 as it has some reference material that's useful to all  $\text{\LaTeX}$ users.

For chapters, sections and subsections you can use `label` to refer to parts of your thesis. and cross-reference a labelled item as such: 1, 1.1, 1.1.1 1.1.1 even if it doesn't have a number, it will still take you to that part you have crossreferenced.

### 1.1 This is a section

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#### 1.1.1 this is a subsection

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#### this is a subsubsection

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quis lorem bibendum diam dictum vulputate vel eu ante. Sed dolor ligula, semper ut volutpat nec, sollicitudin id lacus. Ut mattis felis ut suscipit elementum.

## 1.2 formulae and maths

## Chapter 2

# Demos

### 2.1 Math

#### 2.1.1 Inline Math

Inline math is for when you want to put some equations with the rest of your text. For example, a loss function such as the mean squared error. This is calculated as:  $\sum_{i=1}^D (x_i - y_i)^2$  as you can see it has put in inline with the rest of our text.

#### 2.1.2 Display Math

Next up is display math. This is used when you want to have a formula on a separate line to the rest of your text. Some examples of this are shown below.

$$L_\delta = \begin{cases} \frac{1}{2}(y - \hat{y})^2 & \text{if } |(y - \hat{y})| < \delta \\ \delta((y - \hat{y}) - \frac{1}{2}\delta) & \text{otherwise} \end{cases} \quad (2.1)$$

As you can see it has put the Huber loss function on a different line

A few more examples are below for reference.

$$MI(U, V) = \sum_{i=1}^{|U|} \sum_{j=1}^{|V|} \frac{|U_i \cap V_j|}{N} \log \frac{N|U_i \cap V_j|}{|U_i||V_j|} \quad (2.2)$$

$$Sensitivity = Recall = \frac{TP}{TP + FN} \quad Specificity = \frac{TN}{FP + TN} \quad (2.3)$$

If you want to reference some of your equations in the text of your document. you can add the label parameter with some identifier such as the one above and then use 2.3 to cross-reference it.

if you want something excluded you can include the \* parameter and it will not put it in the list of equations. same goes for chapters, tables, figures or other sections you write.

$$1 + 1 = 2$$

Parameter	Position
h	Place the float here, i.e., approximately at the same point it occurs in the source text (however, not exactly at the spot)
t	Position at the top of the page.
b	Position at the bottom of the page.
p	Put on a special page for floats only.
!	Override internal parameters $\text{\LaTeX}$ uses for determining "good" float positions.
H	Places the float at precisely the location in the $\text{\LaTeX}$ code. Requires the float package. This is somewhat equivalent to h!.

Table 2.1: These are the parameters you can give floats and they also apply to images and tables.

This can be changed in the visual editor of Overleaf quite easily and you can specify as many columns and rows as you see fit

If you want to reference it you can do the same as with equations or chapters. add a label to it and refer to it as 2.1. Note that the labels can be whatever you want. However, its good practice to give them the type that they are such as tab, fig, etc. prefixed to them.

## 2.2 Images

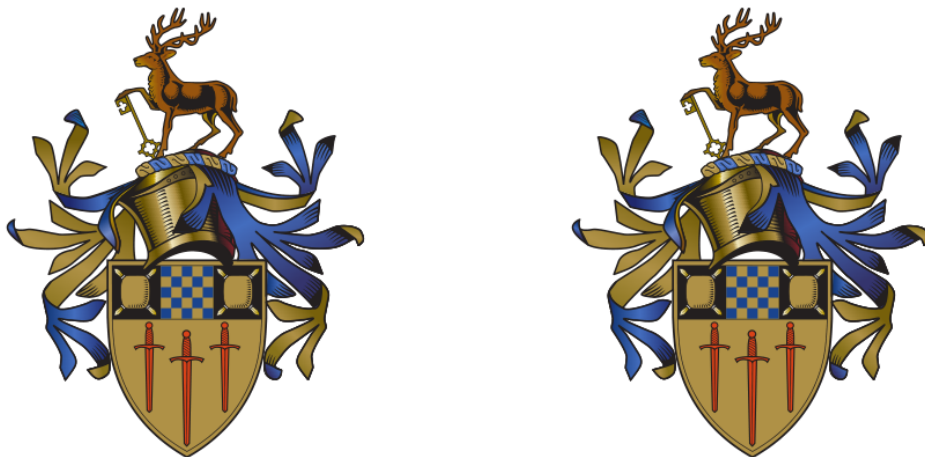


Figure 2.1: A demonstration of tiling two images together

This is a demo of how you can tile images together as one figure. you can add more images and change the widths appropriately. As is the same with others you can label them to cross-reference them in the future as 2.1

Inserting new pages are as simple as

and the rest of the content will be on the next available page.

## 2.3 Lists

### 2.3.1 Unordered Lists

- This
- is
- how
- you
- do
- a
- list

### 2.3.2 Ordered Lists

1. this
2. is
3. a
4. numbered
5. list

## 2.4 Code

```
somepythonlist = []  
for i in range(0,1000):  
    print(i)  
    somepythonlist.append(i)
```

```
\LaTeX  
\cite{turing1950mind}
```

This is how you can enter code segments in  $\text{\LaTeX}$  and all commands are ignored. It prints exactly what you would write.

## 2.5 References and others

### 2.5.1 References

This is how you cite your references and it will add it into the bibliography section[1]. pop your tex citation in bibliography.bib. In most cases, papers you get from Google Scholar will let you export a tex citation and that is the package we use for this. If it is not the case, many publishers will have tex citations, on the site you get the paper from. Another example of references could be here [2] or here [3]

### 2.5.2 Acronyms

you can link your acronyms into the abbreviations like so: Institute of Electrical and Electronics Engineers (IEEE) for the whole thing. There is a command set up for the just the name Institute of Electrical and Electronics Engineersalternatively you can just use the contraction ACM and it will link to the content making it easier for the reader.

Just remember to put them in the abbreviations.tex

## 2.6 etc and Final Words

Here is a link for anything that you want to do with L<sup>A</sup>T<sub>E</sub>X. You can search here for different things you might want to use in your thesis. It is a really good reference tool that has many examples.

Godspeed and hope your thesis writing goes well. As I'm sure you know it's a hard slog, but it's the final step. Make sure you take frequent breaks (go and actually do something else), de-stress when you need to, and pay attention to your body. Eat good food and drink lots of fluids :) you will succeed it's inevitable.

Thanks for reading -Aaron

# Bibliography

- [1] A. M. Turing, “Mind,” *Mind*, vol. 59, no. 236, pp. 433–460, 1950.
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- [3] M. Hamilton and S. Zeldin, “Higher order software,” *IEEE Transactions on Software Engineering*, vol. 2, no. 01, pp. 9–32, Jan. 1976, ISSN: 1939-3520. DOI: 10.1109/TSE.1976.233798.