

## THESIS TITLE

#### FIRST-NAME LAST-NAME

Asian School of the Environment College of Science

A thesis submitted to the Nanyang Technological University in partial fulfilment of the requirement for the degree of Doctor of Philosophy

2023

## **Candidate Statement of Originality**

I hereby certify that the work embodied in this thesis is the result of original research, is free of plagiarised materials, and has not been submitted for a higher degree to any other University or Institution. I confirm that the investigations were conducted in accord with the ethics policies and integrity standards of Nanyang Technological University and that the research data are presented honestly and without prejudice.

Date

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I have reviewed the content and presentation style of this thesis and declare it is of sufficient quality and grammatical clarity to be examined. To the best of my knowledge, it is free of plagiarism and the research and writing are those of the candidate except as acknowledged in the Author Attribution Statement. To the best of my knowledge, the investigations were conducted in accord with the ethics policies and integrity standards of Nanyang Technological University and that the research data are presented honestly and without prejudice.

Date

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- All authors discussed the results and commented on the manuscript.

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The contributions of the co-authors are as follows:

- I lead the writing, research, and analysis.
- I designed the study with ...
- All authors discussed the results and commented on the manuscript.

We the undersigned agree with the above stated "proportion of work undertaken" for each of the above published (or submitted) peer-reviewed manuscripts contributing to the thesis:

#### Signed:

First-name Last-name Student Asian School of the Environment Nanyang Technological University Date: Asst. Prof. First-name Last-name Supervisor Asian School of the Environment Nanyang Technological University Date:

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## Acknowledgements

I wrote and submitted my PhD dissertation using this structure in 2023. Please refer to NTU guidelines for the updated format:

https://www.ntu.edu.sg/research/theses-dissertations

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#### Abstract

ASE Requirement: The Abstract or Summary should summarise the appropriate headings, aims, scope and conclusion of the thesis. It should be of approximately 150 words.

Keywords: keyword1; keyword2; keyword3

## **List of Figures**

1.1	A PDF vector graphics figure. Notice the numbering and placement of	
	the caption. The caption text is indented 2.0cm from both left and right	
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	scaling it. Sometimes bitmap images are unavoidable, such as for screen	
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## **List of Tables**

## **Chapter 1**

#### Introduction

#### 1.1 Background

It is a good idea to discuss the structure of the report with your supervisor rather early in your writing.

#### 1.2 Sample Table

As a recommendation, use regular paragraph text in the tables, bold headings and avoid vertical lines (see Table 1.1).

margin	space
top	3.0cm
bottom	3.0cm
left (inside)	2.5cm
right (outside)	2.5cm
binding offset	1.0cm

Table 1.1: Text margins for A4.

#### 1.3 Sample Figure

As a recommendation, use vector graphics in figures (Figure 1.1), rather than bitmaps (Figure 1.2). Text within figures usually looks better with sans-serif fonts.

## This is vector graphics



**Figure 1.1:** A PDF vector graphics figure. Notice the numbering and placement of the caption. The caption text is indented 2.0cm from both left and right text margin.

# This is raster graphics

**Figure 1.2:** A JPEG bitmap figure. Notice the bad quality of such an image when scaling it. Sometimes bitmap images are unavoidable, such as for screen dumps.

#### 1.4 Sample Equation

You are free to use in-text equations and formulae, usually in *italic serif* font. For instance:  $S = \sum_{i} a_{i}$ . We recommend using numbered equations (e.g. Equation 1.1 when you do need to refer to the specific equations:

$$E = \int_0^{\delta} P(t)dt \quad \longleftrightarrow \quad E = mc^2 \tag{1.1}$$

## Chapter 2

#### **Project 1 Sample**

#### 2.1 Abstract

This is a sample structure based on personal recommendations, and not on NTU guidelines.

#### 2.2 Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results. You can cite single authors (Connor and Connor, 2006) or multiple authors (e.g. Volentik et al. (2010); Costa et al. (2012); Bonadonna and Costa (2013).

#### 2.3 Methods

Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

#### 2.4 Results and Discussion

Results should be clear and concise.

#### 2.4.1 Test case

### 2.5 Conclusions

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

# **Chapter 3**

## **Project 2 Sample**

## 3.1 Sample section

#### 3.1.1 Sample subsection

Sample subsubsection

# Chapter 4

## Conclusions

Your conclusions go here. You can link to specific chapters, for instance, Chapter 1, 2, and 3.

I also like to highlight specific messages using block quotes like this.

4. Conclusions

#### **Bibliography**

- Bonadonna, Costanza and Costa, Antonio. Modeling of tephra sedimentation from volcanic plumes. *Modeling volcanic processes: The physics and mathematics of volcanism*, pages 173–202, 2013.
- Connor, L. J. and Connor, C. B. Inversion is the key to dispersion: understanding eruption dynamics by inverting tephra fallout. In *Statistics in Volcanology*. Geological Society of London, 01 2006. ISBN 9781862392083.
- Costa, Antonio; Folch, A; Macedonio, G; Giaccio, B; Isaia, R, and Smith, VC. Quantifying volcanic ash dispersal and impact of the campanian ignimbrite supereruption. *Geophysical Research Letters*, 39(10), 2012.
- Volentik, Alain CM; Bonadonna, Costanza; Connor, Charles B; Connor, Laura J, and Rosi, Mauro. Modeling tephra dispersal in absence of wind: Insights from the climactic phase of the 2450 BP Plinian eruption of Pululagua volcano (Ecuador). *Journal of Volcanology and Geothermal Research*, 193(1-2):117–136, 2010.

Appendices

# **Appendix A** Title of your first appendix

## A.1 Subsection title

This is your first Appendix section.

# **Appendix B**

## Title of your second appendix

#### B.1 Subsection title 1

You can insert your Appendix B here.

### B.2 Subsection title 2

You can add more sections in your Appendix.