Propositions

accompanying the dissertation

My Thesis

by

Patrick Altmeyer

- 1. Quarto is the most superior form of scientific publishing.
- 2. Julia is the most superior form of scientific computing.
- 3. Counterfactual explanations are the most intuitive way to explain opaque machine learning models [@altmeyer2023explaining].

My Thesis

My Thesis

Dissertation

for the purpose of obtaining the degree of doctor at Delft University of Technology by the authority of the Rector Magnificus, Prof. dr. ir. T.H.J.J. van der Hagen, Chair of the Board for Doctorates to be defended publicly on Tuesday 20, June 2025 at 10:00 o'clock

by

Patrick Altmeyer

MSc, University of Research, Country born in Amsterdam, The Netherlands This dissertation has been approved by the promotors.

Composition of the doctoral committee:

Rector Magnificus, chairperson

Prof. dr. A. Kleiner, Delft University of Technology, promotor Dr. A.A. Aaronson, Delft University of Technology, copromotor

Independent members:

Prof. dr. A. Jansen Delft University of Technology

Prof. dr. ir. A.B.C.D. van de Lange-Achternaam

Delft University of Technology

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Prof. dr. ir. J. Doe Delft University of Technology, reserve member

Other members:

Prof. dr. ir. J. de Wit, Delft University of Technology Dr. ir. Q. de Zwart, Delft University of Technology

This is an optional message to acknowledge partner institutes.







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They not like us.

Kendrick Lamar

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PREFACE

Note

Preface goes here. This chapter is optional.

This is the TU Delft dissertation template for Quarto use the book project type. To learn more about Quarto books visit https://quarto.org/docs/books.

The template uses the quarto-tudelft extension for formatting. The extension itself is adapted from a LaTeX template that can be found at GitLab: novanext/tudelft-dissertation.

Algorithm ??

SUMMARY

In summary, this book has no content whatsoever.

SAMENVATTING

1

INTRODUCTION

This is a book created from markdown and executable code.

2

GUIDE

2.1. FORMAT OPTIONS

This extension provides several variables to customize your thesis title page:

Variable	Description	Example
title	Title of your dissertation	"My Doctoral
		Dissertation"
subtitle	Optional subtitle	"A Study of
		Something
		Important"
author	Full name of the author	"Jane Doe"
author-degree	Highest academic title,	"MSc, University of
	university, country	Research, Country"
author-birthplace	Town/city and country of birth	"Amsterdam, The
		Netherlands"
defense-date	Date and time of the defense	"Tuesday 20, June
		2025 at $10{:}00$ o'clock"
rector	Name of the Rector Magnificus	"prof. dr. ir. A. B.
		Example"
committee	List of committee members	See example below
independent-members	List of independent members	See example below
other-members	List of other members	See example below
contributors	List of committee members	See example below
	who contributed to the	
	dissertation	
keywords	Keywords describing the	"keyword1, keyword2,
	research	keyword3"
printed-by	Printing company information	"University Press"
cover-by	Cover design credit	"Jane Smith"

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Variable	Description	Example
copyright-year	Year of copyright	"2025"
phd-series	PhD series information if	"Casimir PhD Series,
	applicable	Delft-Leiden 2025-01"
isbn	ISBN number	"978-90-8593-000-0"
repository-url	URL to the electronic version	"https://repository.tudelft.nl/"

2.1.1. TU DELFT LOGO INCLUSION

The extension automatically includes the TU Delft logo by default. You can control this behavior:

```
# Include the TU Delft logo (default: true)
institute-logo-tudelft: true

# Add additional logos
institute-logos:
    - path: "images/partner-institute-logo.png"
    - path: "images/another-institute-logo.png"
```

To disable the automatic inclusion of the TU Delft logo:

```
institute-logo-tudelft: false
```

When providing your own logos, the TU Delft logo (if enabled) will always appear first, followed by your specified logos.

2.1.2. MULTIPLE INSTITUTE LOGOS

To include multiple logos of institutions that contributed to your research:

```
institute-logos:
   - path: "images/tudelft-logo.png"
    spacing: "1.5cm" # Optional spacing between logos
   - path: "images/partner-institute-logo.png"
```

Alternatively, for a single logo, you can use the simpler syntax:

```
institute-logo: "images/tudelft-logo.png"
```

2.1.3. EXAMPLE YAML CONFIGURATION

```
title: "My Doctoral Dissertation"
subtitle: "A Study of Something Important"
author: "Jane Doe"
author-degree: "MSc, University of Research, Country"
author-birthplace: "Amsterdam, The Netherlands"
defense-date: "Tuesday 20, June 2025 at 10:00 o'clock"
rector: "prof. dr. ir. A. B. Example"
# Committee members
committee:
  - title: "Prof. dr. A. Kleiner"
    affiliation: "Delft University of Technology"
   role: "promotor"
 - title: "Dr. A.A. Aaronson"
    affiliation: "Delft University of Technology"
   role: "copromotor"
independent-members:
 - title: "Prof. dr. A. Jansen"
    affiliation: "Delft University of Technology"
 - title: "Prof. dr. ir. A.B.C.D. van de Lange-Achternaam"
    affiliation: "Delft University of Technology"
   name-too-long: true # Use this for names that need to be on their own line
 - title: "Prof. dr. N. Nescio"
   affiliation: "Politecnico di Milano, Italy"
 - title: "Prof. dr. ir. J. Doe"
   affiliation: "Delft University of Technology"
   role: "reserve member"
other-members:
  - title: "Prof. dr. ir. J. de Wit"
   affiliation: "Delft University of Technology"
 - title: "Dr. ir. Q. de Zwart"
    affiliation: "Delft University of Technology"
# Contributors to dissertation
contributors:
  - title: "Prof. dr. ir. J. de Wit"
    affiliation: "Delft University of Technology"
# Institute logos (choose one approach)
institute-logos:
```

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```
- path: "images/tudelft-logo.png"
    spacing: "1.5cm"
- path: "images/partner-institute-logo.png"

# Publication details
keywords: "keyword1, keyword2, keyword3"
printed-by: "University Press"
cover-by: "Jane Smith, featuring an abstract representation of the research to isbn: "978-90-8593-000-0"

format:
    tudelft-thesis-pdf: default
---
```

2

COOL QUARTO THINGS

3.1. CUSTOM CALLOUTS

The template adds custom numbered blocks using the embedded ute/custom-numbered-blocks extension, which supports HTML and PDF with non-standard cross-references (i.e. \ref{} syntax). We provide two custom numbered blocks:

We provide two custom numbered blocks:

- 1. TRQ for Thesis Research Questions
- 2. **RQ** for Research Questions
- 3. **Rec** for Recommendations

TRQ 3.1 is an example of a Thesis Research Question; RQ 3.1 is an example of a Research Questions; Rec. 3.1 is an example of a recommendation.

Thesis Research Question 3.1: What is a TRQ?

This is a Thesis Research Question, that you might want to use in the introduction of your thesis.

Research Question 3.1: What is a RQ?

This is a Research Question, that you might want to use in any chapter of your thesis.

Recommendation 3.1: What is a Rec?

This is a Recommendation that you might want to use in the conclusion of your thesis.

REFERENCES