

Open interactive boeken



TeachBooks: Teachers'
Educational Assistance for
interActive Hands-on Browser-
based Online Open Knowledge
for Students

Deze presentatie: doi.org/10.5281/zenodo.14454542



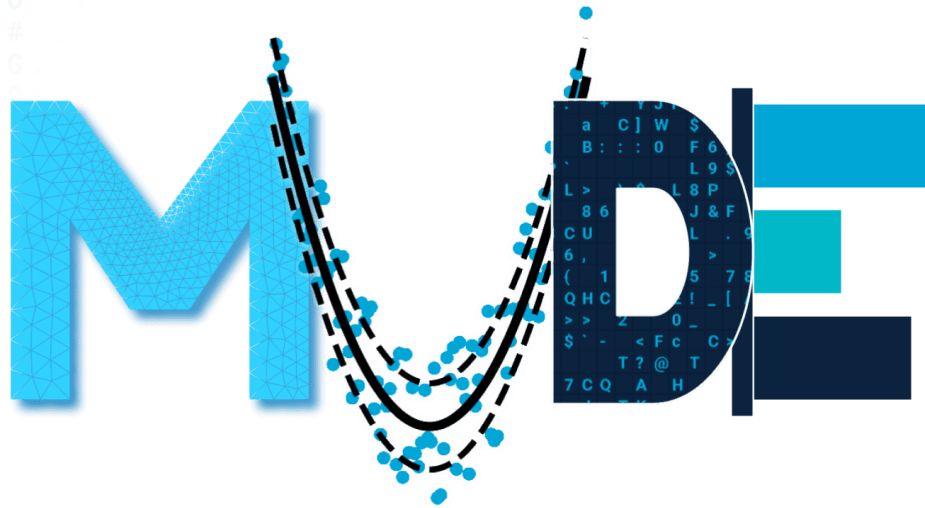
Vragen rondje

Wie ben jij?

(Steek je vinger op)

Docenten, didactici of onderwijsontwikkelaars?

Waar is het begonnen?



Modelling, Uncertainty and Data for Engineers (MUDE)

- Civil Engineering and Geosciences, TU Delft (CEGM1000)
- 1^e jaar MSc studenten (~300)
- Voor het eerst aangeboden in 2022-2023

Waar is het begonnen?

Q1

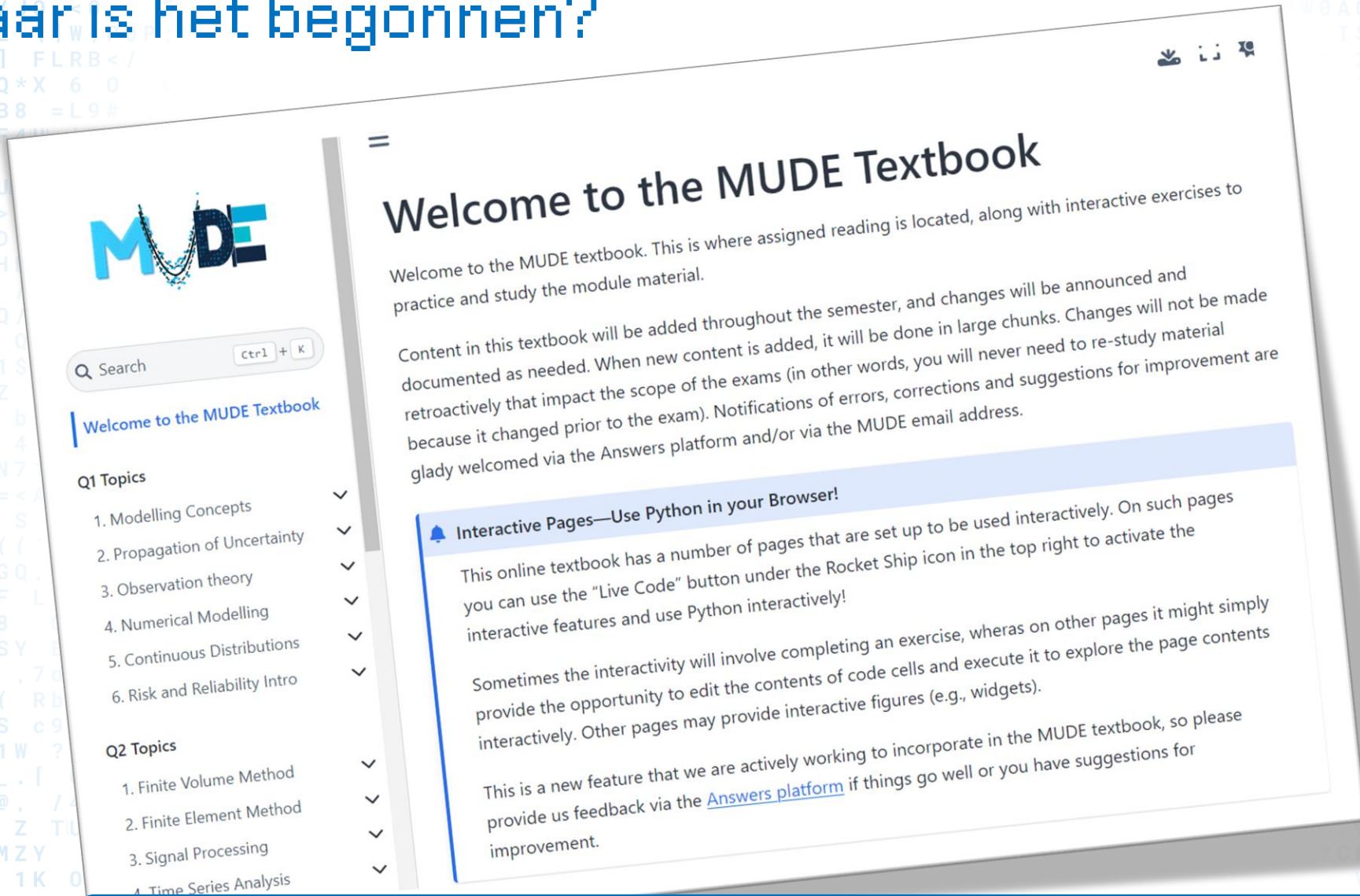
1. Modelling Concepts
2. Propagation of Uncertainty
3. Observation theory
4. Numerical Modelling
5. Continuous Distributions
6. Risk and Reliability Intro

Q2

1. Finite Volume Method
2. Finite Element Method
3. Signal Processing
4. Time Series Analysis
5. Optimization
6. Machine Learning
7. Extreme Value Analysis
8. Risk and Reliability, Part 2

Vereist programmeren

Waar is het begonnen?



mude.citg.tudelft.nl/book

Voorlopig, neem contact met ons op voor toegang. Binnenkort CC BY...

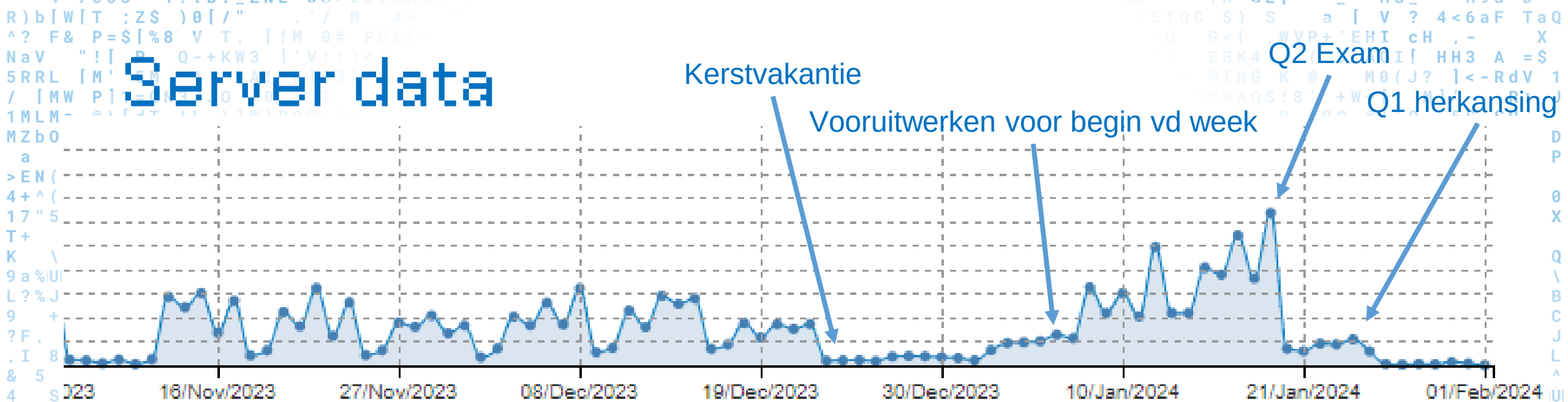


Interactieve elementen in TeachBooks

De interactieve elementen zijn gedemonstreerd met een aantal videos die niet in deze PDF zijn opgenomen. Deze kunnen worden bekeken op:

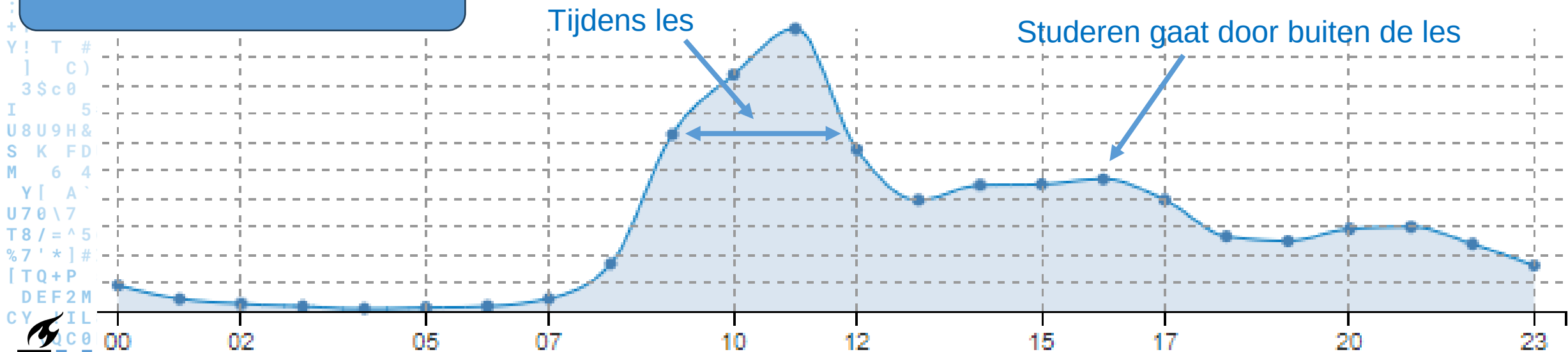
- Diverse interactieve elementen: <https://youtu.be/gbBsWo6em4c>
- Quiz vragen: https://youtu.be/eUmdEu_Z5us
- Neural Network: <https://youtu.be/8AeYnKn4Tcg>

Server data



Verticale schaal relatieve activiteit

Usage of website during Q2



Usage of website by hour of day (all days)

Wat vonden studenten van het boek?

(100% response rate)

Strongly Disagree Disagree Neutral Agree Strongly Agree

A website is better than a paper book

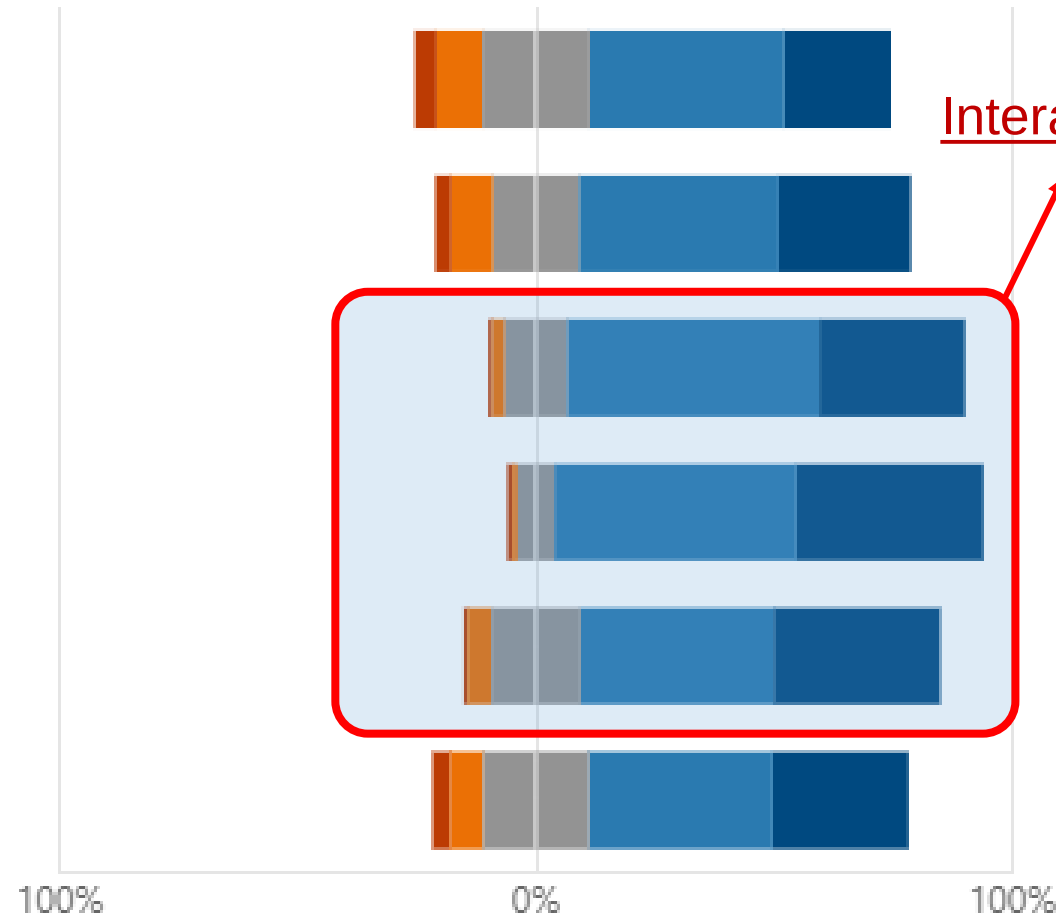
A website is better than a PDF book

Videos in the book were useful

In-line quiz questions were useful

Python-enable pages were useful

More courses should use this type of book



Interactiviteit wordt gewaardeerd



Wat vonden studenten van het boek?

(100% response rate)

Strongly Disagree Disagree Neutral Agree Strongly Agree

A website is better than a paper book

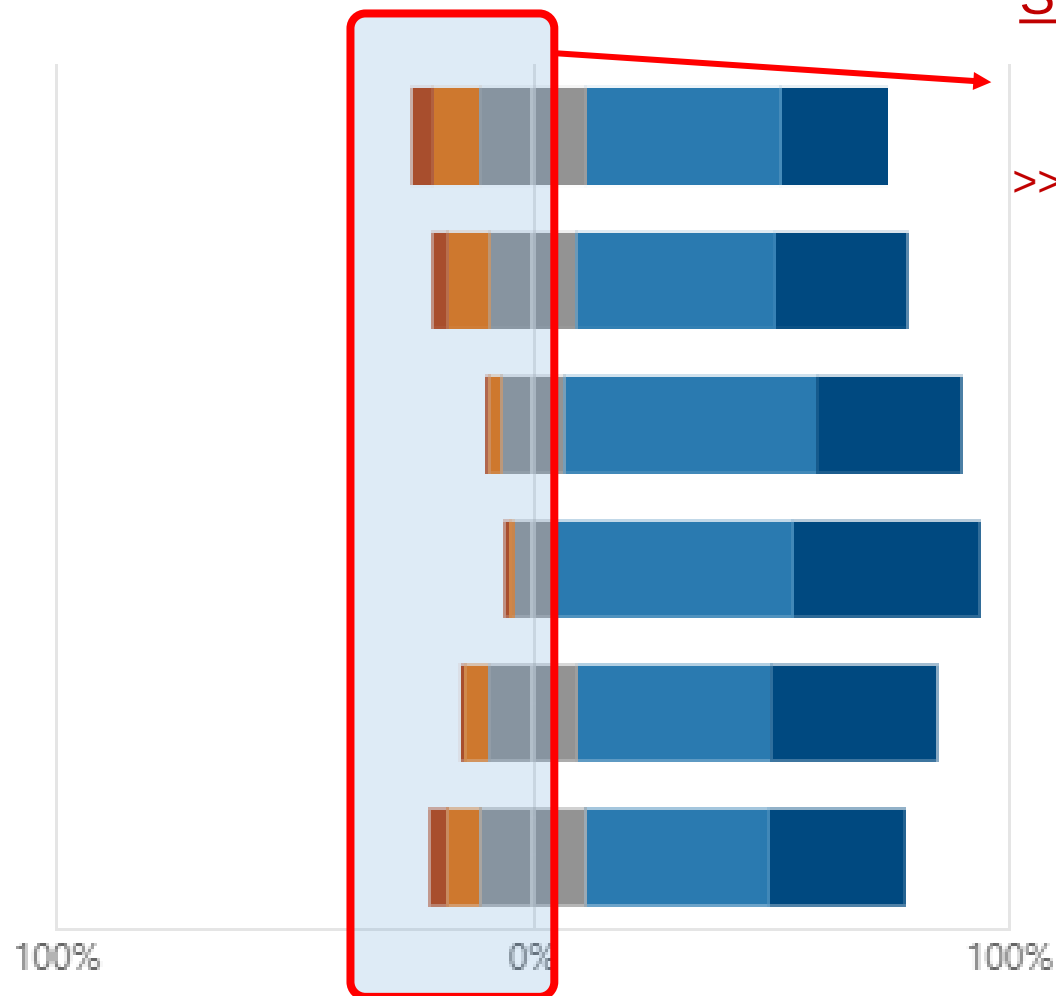
A website is better than a PDF book

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Studenten willen hun eigen versie van het boek

>>> Nieuwe tooling in ontwikkeling



Wat vonden studenten van het boek?

Ik wil mogelijkheid om boek te vertalen



*Mogelijkheid om PDF versie van boek te krijgen voor
highlighten en annoteren*



*Toen de TU Delft server offline waren haatte ik het feit dat we
een online boek gebruikten.*



Wat zeggen onze collega's?



Mijn studenten zeggen dat ik ook zo'n boek moet hebben, hoe doe ik dat?



Ik wil je boekinhoud hergebruiken!



Kan ik die interactieve Python functie ook gebruiken?

Git, python, markdown, CLI, servers?

Dat kan ik allemaal niet!



Vragenrondje

Welke tooling ben je bekend mee?

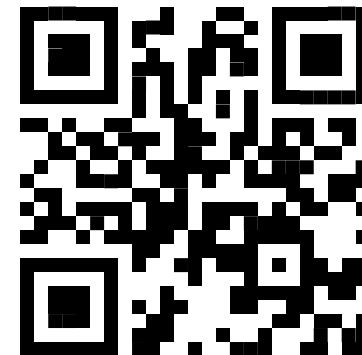
(steek je vinger op)

Git, Jupyter Book, Python, CLI, ...

TeachBooks



Teachers' Educational Assistance for
interactive Hands-on Browser-
based Online Open Knowledge for
Students

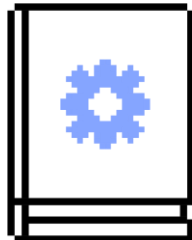


teachbooks.io



TeachBooks

Manual

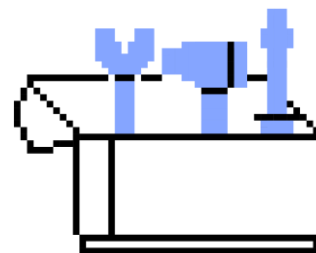


Template



Je eigen boek in
10 klikken!

Software
collectie



Verbeteren student-
ervaring, boek-styling,
toevoegen
functionaliteiten,
vergemakkelijken proces

Support en
promotie
gebruik





Boeken



Part 3 - Folder Organisation

3a. Relevance:

? Why does folder organisation matter to me and my collaborators?

BEFORE:

With a cluttered desktop like this, it can be difficult to see what's where, and hard to stay organised.



"Desktop Chaos" by TU Delft Library - Education Support is licensed under [CC BY 4.0](#)

AFTER:

With an organised system of folders, it's easier to locate exactly what you need.



"Desktop Harmony" by TU Delft Library - Data Analysis Team is licensed under [CC BY 4.0](#)

A system of sub-folders helps you organise items into more intentional and manageable categories. This will make it possible to find elements more easily and save you time in the long run, especially during big projects.



3. Semantic errors

According to the Oxford Dictionary, 'semantic' is an adjective relating to meaning. Therefore, a 'semantic error' is an error in the meaning of your code. Your code will still run without giving any error back, but it will not result in what you expected (or desired). For that reason, semantic errors are the hardest to identify. Below an example:

I want to raise 2 to the 3rd power. However, I apply the wrong syntax that does not represent "pow()".

No error message is created, because this syntax is used for another function in Python. However, this results in an output I did not expect nor desire.

```
power_of_2 = 2^3
print(f'2 to the 3rd power is {power_of_2}')
```

```
2 to the 3rd power is 1
```



10.1. Spans in steel

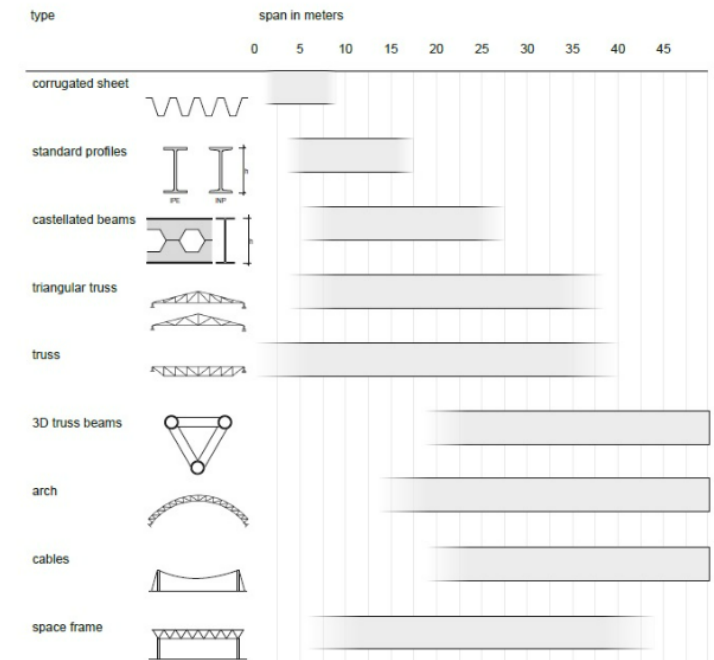


Fig. 10.1 Spans in steel.



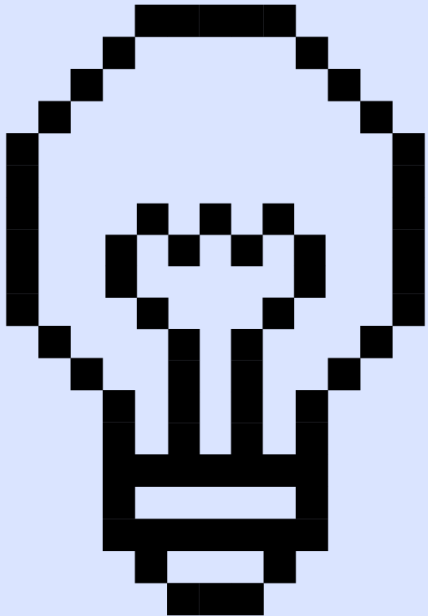


TeachBooks

- Meer dan 40 boeken actief gebruikt in Onderwijs
- 180 bekende gebruikers van GitHub workflow + onbekend aantal gebruiker van tooling
- Duizenden studenten maken gebruik van TeachBooks van TU Delft, Leidne, Rotterdam
 - Teams van 1 – 50 auteurs



Workshop samen een TeachBook maken





TEACHBOOKS

Manual

Search Ctrl + K

Your First TeachBook!

- What is a TeachBook?
- How can you do it?
- It only takes 10 clicks!**
- 1: Edit Contents
- 2: How it's Made
- 3: Change Metadata
- 4: Online Editor
- 5: Your Version
- 6: Submit for Review
- 7: Collaborate
- Summary
- What Next?

It only takes 10 clicks!

Now that you've been introduced to the basics of a Jupyter Book, let's make one! The TeachBooks Team has put together a set of tools to make the book-creation process as smooth and automatic as possible. This page guides you through the process of creating a book, followed by a series of exercises that are designed to help you get used to the syntax and structure of a Jupyter Book, as well as the tools and essential workflows associated with the editing, checking and review processes.



1. Create a GitHub account

TeachBooks relies of freely available services from GitHub to store files online, carry out the book-building process and host your book as a website. All you need to get started is a GitHub account (not counted in the 10 clicks 😊).

Task 1

If you don't already have one, create a GitHub account here by visiting github.com/signup.

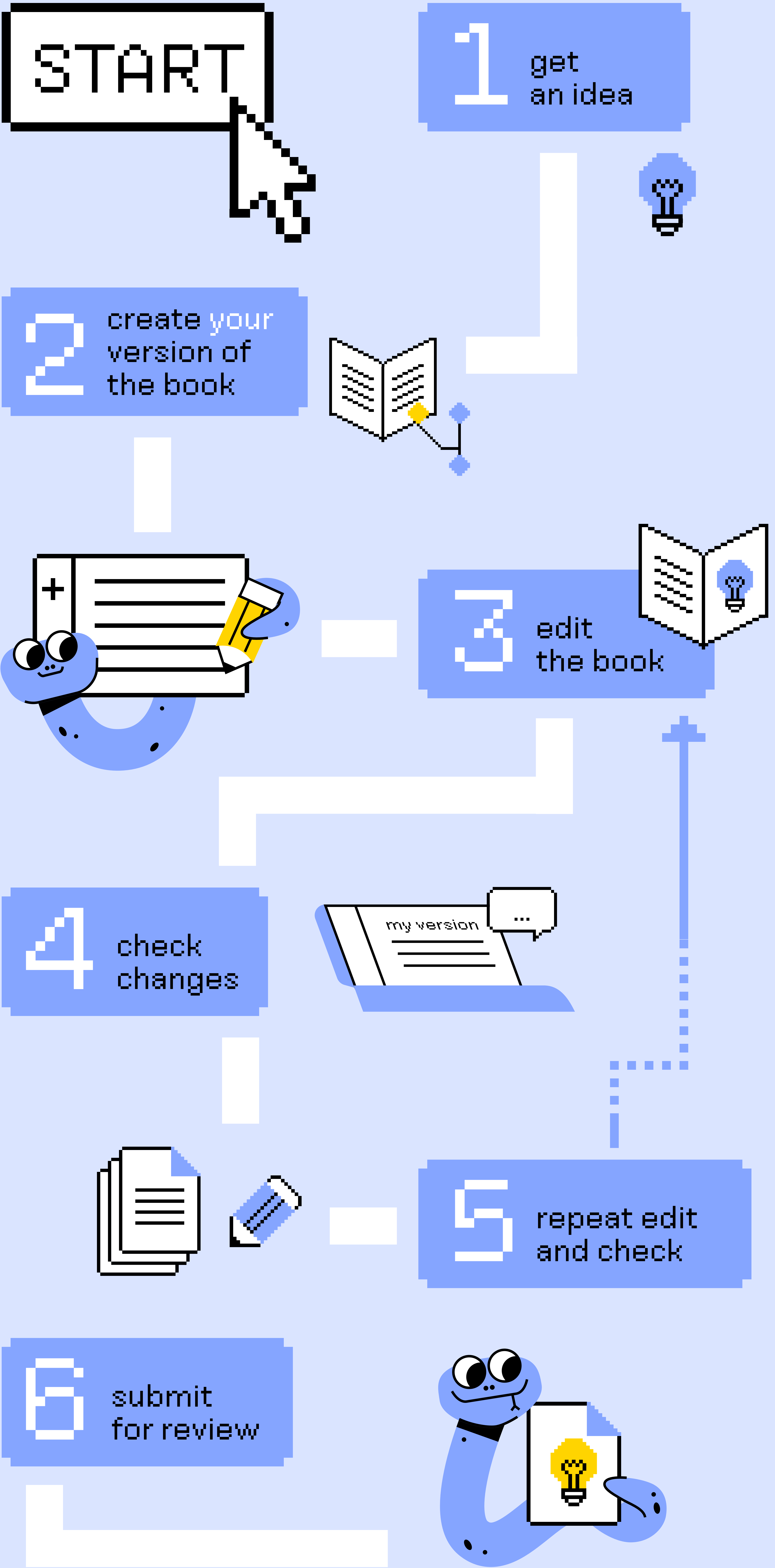
2. Use the template—it's really just 10 clicks!

Now, let's make a book: we've made a template on GitHub which carries out *most* of the technical steps required to create a book and put it online. Instructions for using the template are in the [README](#) of the

Contents

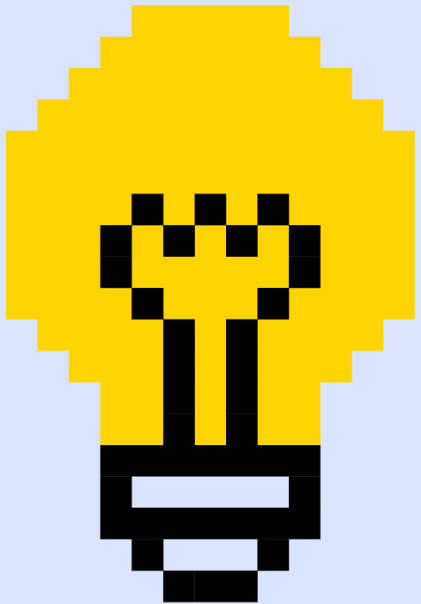
1. Create a GitHub account
2. Use the template—it's really just 10 clicks!
3. Check out your book!
4. Let's practice!

TEACHBOOKS
_process overview





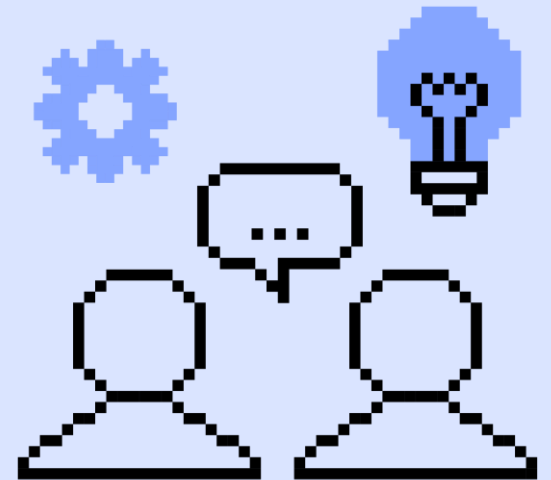
Workshop



Getting started! In manual:
<https://teachbooks.io/manual>

- Git-basics en workflow
- Syntax beperkt behandeld

Vragen? Stel ze aan Tom, Robert
of Julie!





TeachBooks

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TeachBooks

teachbooks.io

- Template
- Software package
- Manual
- Support and inspiration

Deze presentatie:

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