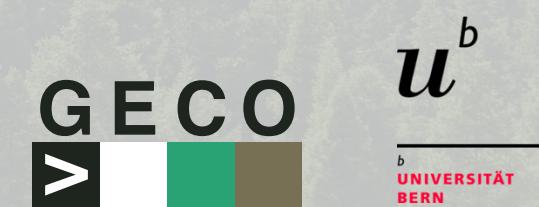


Applied Geodata Science 1

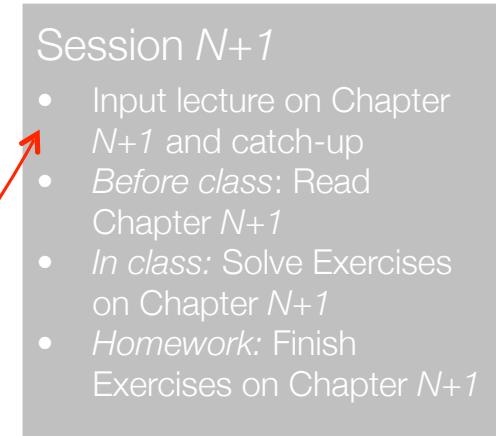
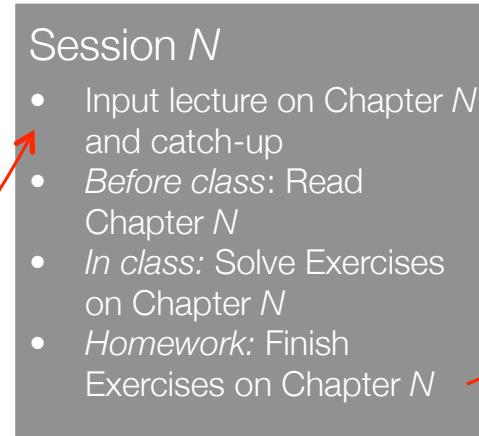
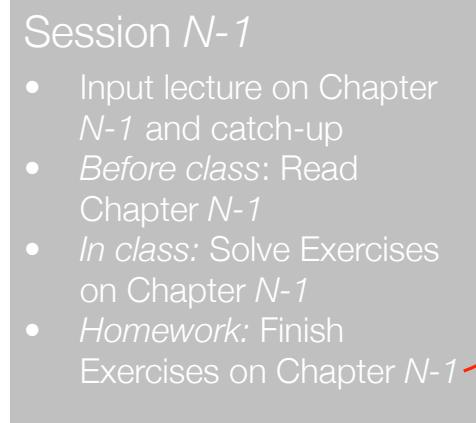
Logistics

Prof. Dr. Benjamin Stocker
Spring semester 2025



How does AGDS I work?

- English
- Hybrid setup: input lectures + flipped classroom



Before class: 2 h

2 h

Homework: 3-4 h

How does AGDS I work?

1 Getting started 17.02.

2 Programming primers 24.02.

3 Data wrangling 03.03.

- Report Exercise: Tidy data

4 Data visualisation 10.03.

- Report Exercise: Air quality data

5 Data variety 17.03.

6 Open Science practice 24.03.

7 Code management 31.03.

- Report Exercise: Collaborating with git

8 CARE SESSION I 07.04.

- Work on R. Ex. 7 **as team exercise!**

9 Regression 14.04.

- Report Exercise: Stepwise regression

10 Supervised ML I 28.04.

- Report Exercise: KNN

11 Supervised ML II 05.05.

- Report Exercise: Flux modelling

12 Random Forest 12.05.

13 Interpretable ML 19.05.

13 CARE SESSION II 26.05.

- Catch-up and preparations for final report

FINAL REPORT

- Hand in as reproducible code (*git* repository)
- Repo 1: Consists of 5 elements implementing Report Exercises (separate RMarkdown files)
- Repo 2 and 3: From Report Ex. 7

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Final report

FINAL REPORT

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- Repo 2 and 3: From Report Ex. 7

Criteria:

- Reproducible
 - Coding practice
 - Quality of visualisations
 - Workspace structure (files, directories)
 - Interpretation
-
- **Hand in by 09.06.2025 8.00 CET**

Lecture notes

- Online book as lecture notes:

https://geco-bern.github.io/agds_book/

Preface
1 Introduction
2 Getting started
3 Programming primers
4 Data wrangling
5 Data visualisation
6 Data variety
7 Open science practices
8 Code management
9 Regression and classification
10 Supervised machine learning I
11 Supervised machine learning II
12 Random Forest
13 Interpretable Machine Learning
Appendix
References

Applied Geodata Science

AUTHOR

Benjamin Stocker, Koen Hufkens, Pepa Arán, and Pascal Schneider

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Preface

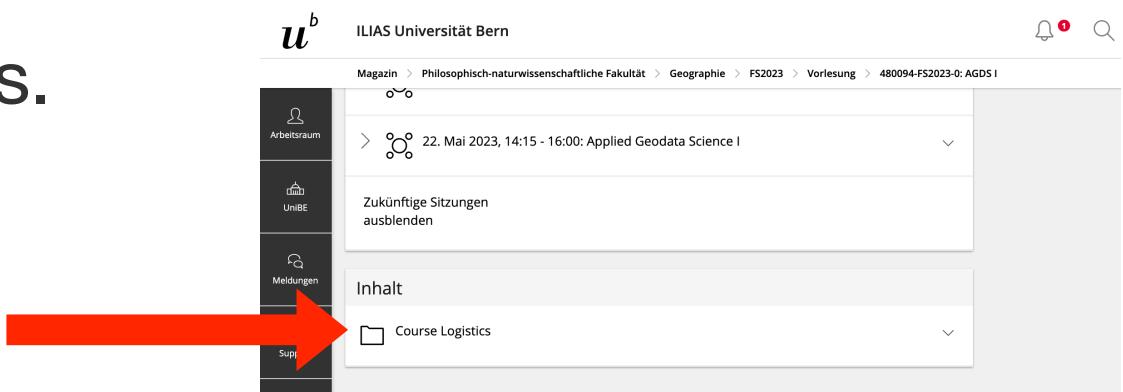


Table of contents
Preface
Contents
Links
License
How to cite this book

- Contains all tutorials
- As reproducible code
- With exercises and solutions for self-study

How does AGDS I work?

- Monday 14.15-16.00 is our presence time.
Use it!
- No email communications.
- No recordings. It's all in the book.
- Highly recommended for AGDS 2 (Master, fall semester 2025)
- Work on your own laptops.
- Why R?
- Info on ILIAS:



The screenshot shows the ILIAS interface for the University of Bern. At the top, there is a navigation bar with links to Magazin, Philosophisch-naturwissenschaftliche Fakultät, Geographie, FS2023, Vorlesung, and 480094-FS2023-0: AGDS I. A red arrow points from the bottom left towards the 'Course Logistics' section. The main content area displays a list of future sessions: '22. Mai 2023, 14:15 - 16:00: Applied Geodata Science I'. Below this, there is a section titled 'Zukünftige Sitzungen ausblenden'. Further down, under 'Inhalt', there is a folder icon followed by the text 'Course Logistics'.

Our expectations towards you

- Read the Chapters ahead of class.
- Use our service most effectively.
- Keep up.
- Don't accumulate questions.
- These are your tools for your journey with data.
- Be kind.