

# preamble, Methods 3, 2025

2025-09-11

REMEMBER: This preamble is **NOT** part of your portfolio, but is a prerequisite for doing the portfolio

## Preamble - *GitHub, Python, Conda*

The goals of the preamble are:

- 1) create a *Conda* environment that contains the *Python* packages that we need. Note that we are not creating an R environment - I expect you to maintain your own
- 2) install your R-packages
- 3) connect your *GitHub* profile to the *GitHub* classroom such that you can hand in assignments and access course materials

### 1) What is *Conda*?

*Conda* is a package management and environment system.

#### What is a package?

(from ChatGPT)

- *Python*: Packages are collections of Python modules. They are often distributed as .whl or .tar.gz files. Examples include *numpy*, *pandas*, and *requests*.
- *R*: Packages are collections of R functions, data, and compiled code. They are distributed as .tar.gz files. Examples include *ggplot2*, *dplyr*, and *shiny*.

#### Why environments?

We use environments to create **isolated**, **shareable** and **conflict-free spaces** for our projects, e.g. the *methods3\_2025* that we are going to create now won't interfere with other projects that we may be running

#### Installing *Conda*: miniconda vs. anaconda

*Section can be skipped if you already have miniconda installed*

I recommend installing *Conda* using the **miniconda** distribution. The **anaconda** distribution comes with many pre-installed packages, which may lead to conflicting packages when creating environments.

*Command line install (preferred method)*

**Link:** <https://docs.anaconda.com/miniconda/#quick-command-line-install>

(If you already have **anaconda** installed, you may prefer keeping it to not create any conflicts )

On Mac and Linux, use the terminal; on Windows use the Anaconda Power Prompt that comes with installing anaconda

### Create *method3\_2025* environment

```
cd <path_that_contains methods_environment.yml> # go to folder with methods3_environment.yml file
conda env create -f methods3_environment.yml # create environment
conda activate methods3_2024 # activating your newly created environment
```

### First goal achieved

You are now in an environment that is **isolated** from all *Python* that you may have installed at earlier date.

The **shareable** *methods3\_environment.yml* file contains the recipe for the environment and *Conda* makes sure that the installation is **conflict-free** in terms of dependencies.

### Installed packages:

```
cat methods3_environment.yml
```

```
name: methods3_2025
```

```
channels:
```

```
- defaults
```

```
- conda-forge
```

```
dependencies:
```

```
## Python version
```

```
- python>=3.13.7
```

```
## Python packages
```

```
- pip=25.2
```

```
- scikit-learn=1.7.1
```

```
- matplotlib=3.10.5
```

```
- numpy=2.3.1
```

```
- scipy=1.16.1
```

```
- pandas=2.3.2
```

```
- seaborn=0.13.2
```

## 2) R packages to install

We are going to be dependent on the packages *lme4* and *fields*.

Please install as you usually do

## 3) Connect your \_\_GitHub account to the \_\_GitHub Classroom:

The *GitHub Classroom* is where assignments will be shared and where answers to them can be uploaded (If you don't have a *GitHub* account sign up at [www.github.com](https://www.github.com))

### Accepting an assignment

Click the shared assignment link: <https://classroom.github.com/a/ELwibfE5>

The assignments will be handed in the by the study groups that you have been assigned:

**IMPORTANT:** Create your study group using the appropriate name below: (I do know some of you go by other names, but using the names you are registered by makes it easier to cross-check with the official rosters)

### Team names

### IMPORTANT

- Do double check that you wrote it exactly as I do below
- I think only one person should create it, while the rest can just join

Team names

- DávidViktorChristianIda
- AmalieMaikenMikkelCarina
- ArinaNajaJohanaTeréziaHannah
- AsgerDominikJesperKamila
- AyaSigneJensKatrineNanna
- CasperSørenMadalinaAsgerSofie
- CiljaSarahLineaMelanie
- DomonkosYoavMadsDóra
- EmaVictoriaAlessandraMartinJosefine
- EmmaMariusMilleAndrea
- GreteJakobNeleHelenKamila
- AnnePaulineAlexAsta-MarieSophia
- JuleJuliaAurelijaSilas
- KatarinaNoraCamillaSørenAdriána
- KatrineVictoriaEmilVivi
- MagnusNannaEmiliaWilliam
- NoemiRitaWilliamSara
- PetraSineHansAgnes

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## Accept the group assignment — Preamble\_test

Before you can accept this assignment, you must create or join a team. Be sure to select the correct team as you won't be able to change this later.

Create a new team:

+ Create team

Figure 1: Enter team name

### Doing the assignment


When you have accepted the assignment, you will see the *.Rmd* or *.ipynb* file with the assignment:

You can then *clone* the repository, by clicking the green *code* button and copying the URL

```
git clone <URL to repository>
```

Then provide the solution in the Rmd and knit a pdf

Then add, commit and push to your repository (from your cloned folder)


**methods-3-2025-preamble\_test-2025\_preamble**
Private


[generated from Methods-3/2025\\_preamble](#)




[Edit Pins](#)
[Watch 0](#)

---

[main](#)
[1 Branch](#)
[0 Tags](#)

[Add file](#)
[Code](#)


**ualsbombe** updated
 f0c2131 · 1 hour ago
4 Commits

 LICENSE	Initial commit	1 hour ago
 README.md	readme	1 hour ago
 preamble_test.Rmd	updated	1 hour ago

[README](#)
[AGPL-3.0 license](#)

Please answer the questions in "preamble\_test.Rmd"

Figure 2: The assignment repository

```

---
title: "preamble_test"
date: "2025-09-11"
output: html_document
---

# Exercises and objectives

The objectives of today's exercises are:\
1) Check that your environment works by running single level ...
2) ... and multilevel models in R
3) Run a single level model in Python

```

Figure 3: The assignment

```
git add preamble_test.Rmd
git add preamble_test.html
git commit -m "solution <group_name>"
git push
```

Now your assignment repository contains the solution, where I (Lau) can access them






 <b>ualsbombe</b> solution lau		7b35ac6 · 3 minutes ago	 4 Commits
 LICENSE	Initial commit		1 hour ago
 README.md	Initial commit		1 hour ago
 assignment_0_test.Rmd	solution lau		3 minutes ago
 assignment_0_test.pdf	solution lau		3 minutes ago

Figure 4: repository with solution

The URL's to the four assignments that go into the portfolio will be shared through Brightspace

## Conclusion

**Third goal achieved:** you can now access the portfolio assignments as they are uploaded, and you will be able to upload your answers to your group repositories

**This concludes the preamble test**