

Introduction to Data Analysis with R

Day 1: Welcome to the workshop

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Who am I?



Scientific programmer @theoretical ecology group



PhD in dryland ecology



Teaching R, Git, good scientific practice, ...

I'm using a lot for ...

... data analysis

... ecological modelling

... writing documents/websites/presentations

.... workflow automation

...

Who are you?

Optimising **CAR-T cell treatment** using **mathematical modelling**

Improving **microdialysis calibration** approaches.

Survival of **memory B cells**

Neurodevelopment

How can model-informed **precision dosing** be applied across different therapeutic areas?

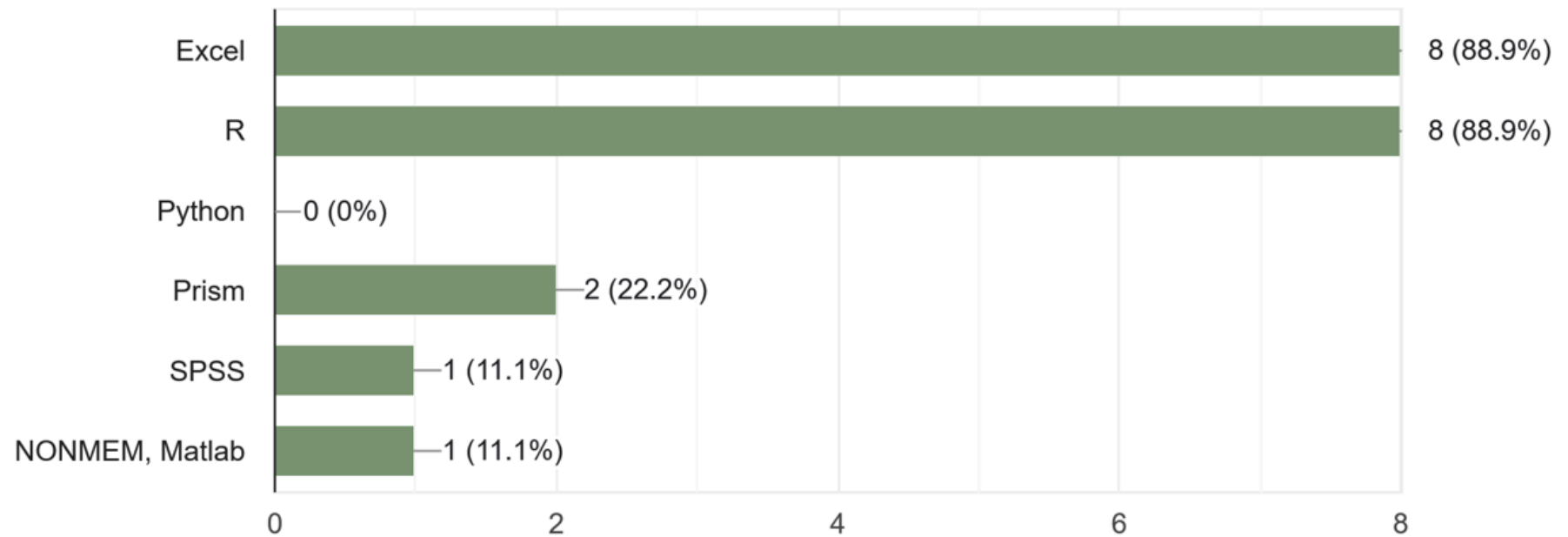
What can **angiosperm inclusions in Baltic amber** tell us about the paleoecosystem and plant evolution?

How can we optimise a specific **antibiotic combination therapy** by using a combined in vitro/in silico approach?

Who are you?

Which tools did you use for data analysis so far?

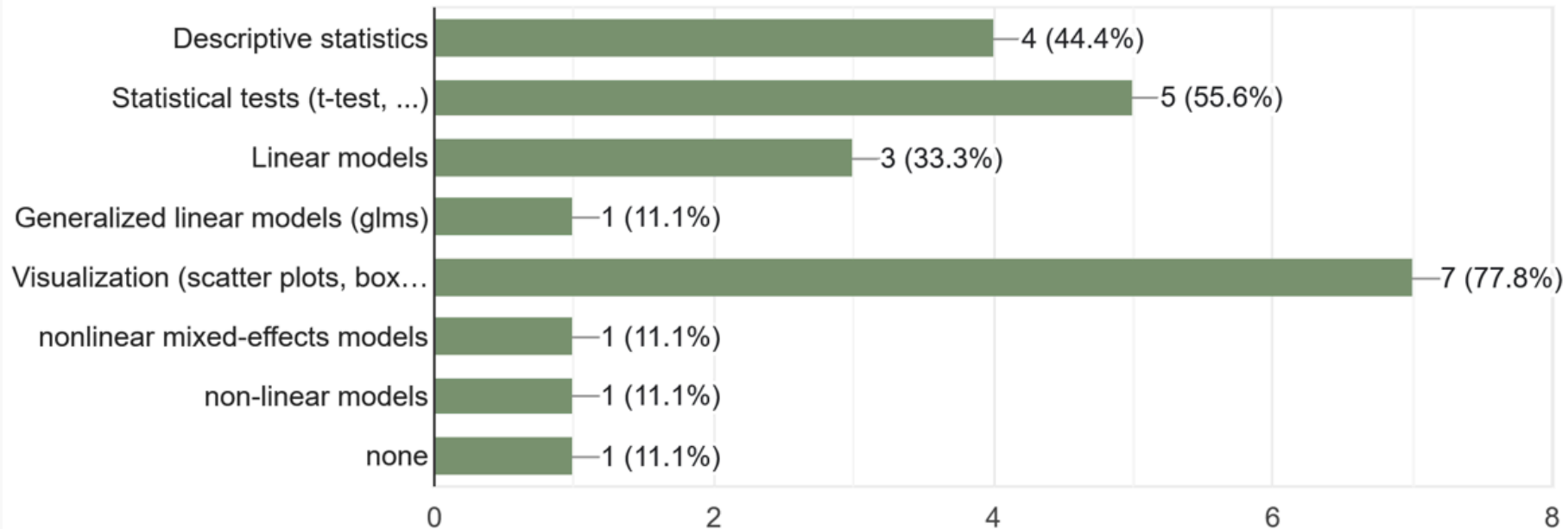
9 responses



Who are you?

Which of the following data analysis methods do you use regularly?

9 responses



Workshop topics

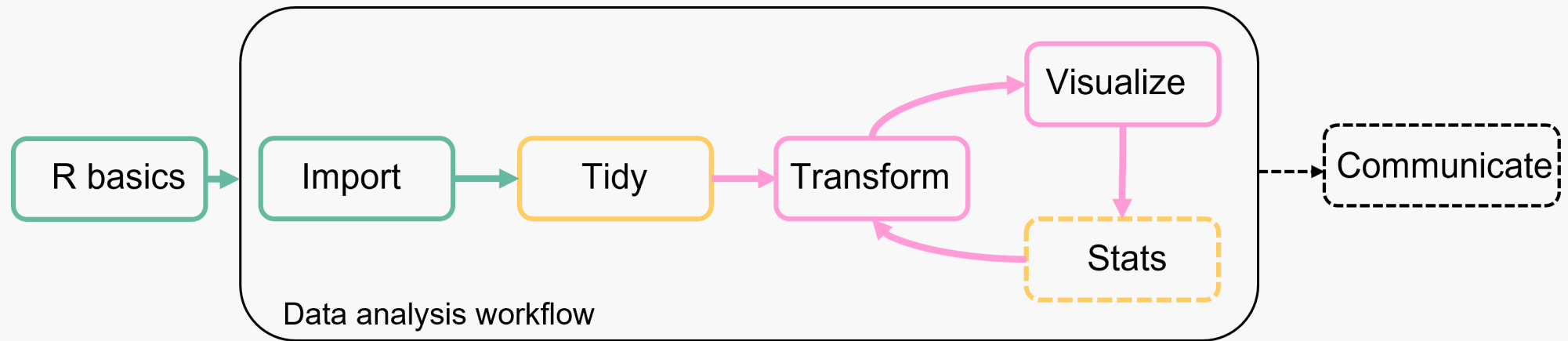


Image adapted from Wickham & Grolemund: [R for Data Science](#)



Day1 Introduction to R and RStudio and data import



Day2 Data transformation and visualization with the tidyverse

Day3 Cleaning data, statistical tests, good practice and AI tools

Day 4 Bring your own data

Schedule and Organization

 06.10.2025 - 07.10.2025 from  9 a.m. - 4 p.m.

 13.10.2025 - 14.10.2025 from  9 a.m. - 4 p.m.

 ~ 12 a.m. - 1 p.m.,  in between

 We will meet in the **General** meeting on Webex

1. Input sessions

- Presentation and demonstration of a topic + examples

2. Tasks

- Solve them in small groups

3. Joint discussion of tasks & questions

Material

- All material can be found on the [workshop's website](#)
 - Presentations, Tasks, Solutions, Additional resources
- You can download slides and R Scripts from there
- Website will stay online after the workshop

Bring your own data

On the last workshop day, you can **work with your own research data**. I will also provide some **real life data sets** from different topics.

Learning by doing

- Get started using R for your own analyses
- Use any of the methods from the course or try new things, ...
- Present/discuss your results, questions and problems at the end of the day
- Add your name and some details on what you plan to do in this [joint table](#)

Before we get started I

- **Help each other** if possible
- Have an eye on the chat and on the time
- All questions and comments are welcome
- If possible, please turn on your camera
- Feedback is welcome (Evaluation at the end of the workshop)

Before we get started II

Did anyone have problems installing R and RStudio?



Download and install R from <https://cran.r-project.org>



Download and install RStudio from <https://www.posit.co>

Before we get started III

How to use Webex teams

- **General** channel for our joint meetings and chat
- **Groups 1-4** for solving tasks jointly
 - Group spaces have their own chat and meetings
 - Ask questions in the chat, share screenshots, share your screen and talk

Now you (10 min)

Get to know your team

- Go into your groups and start a meeting there
- Introduce yourself to your team (~2 minutes for everyone)
 - What is your PhD about?
 - Which tools did you use so far for data analysis?
 - Which types of data analysis do you do/want to do?
- Come back to the general meeting after 10 mins