

# Introduction to Data Analysis with R

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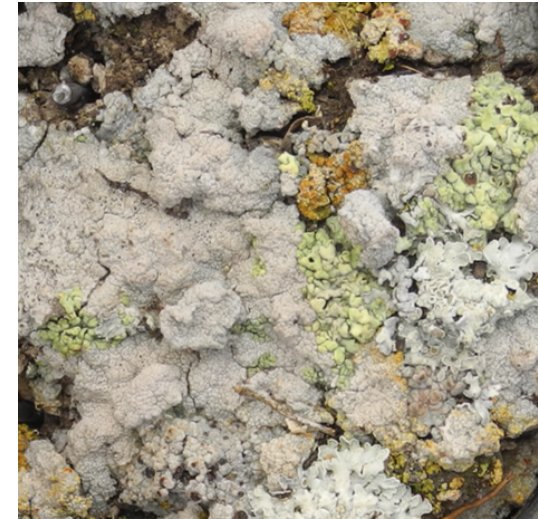


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Artwork by [Allison Horst](#)

# Who am I?

- Scientific modeller with ecology background
- Working in the **theoretical ecology group** at Freie Universität
- PhD student at Freie Universität Berlin
  - Topic: Modelling the impact of biological soil crusts on dryland hydrology



## Teaching

- Statistics with R for Biology Master students
- Workshops on R packages, R development, ...



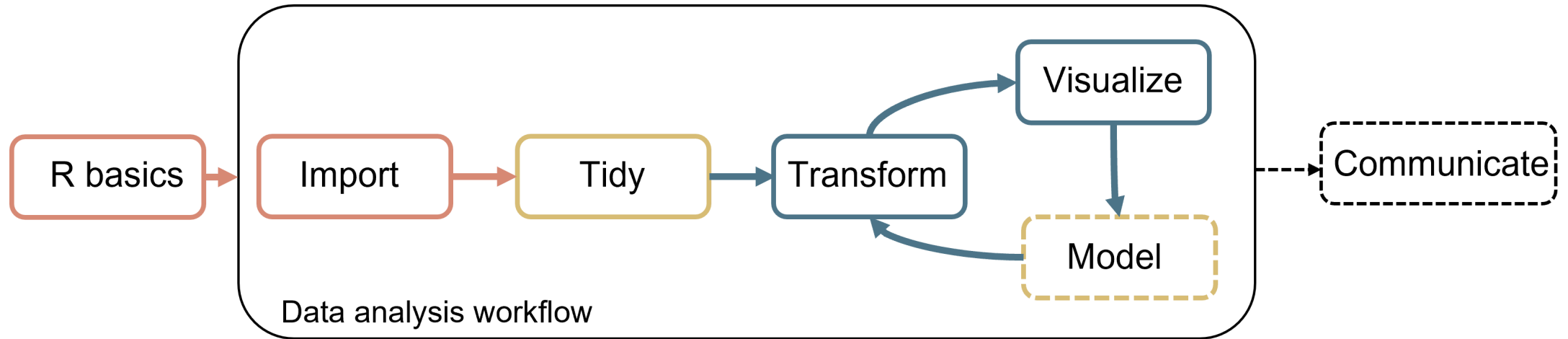
# What do I use for?

- Cleaning data
- Visualizing data
- Wrangling data
- Performing statistical analyses
- Modelling biocrusts
- Writing documents
- Presentations
- Workflow automation
- ...

# Who are you?

Results of questionnaire

# The Workshop: Topics



Day 1: Introduction to R and RStudio and data import

Day 2: Data transformation and visualization with the tidyverse

Day 3: Cleaning data (optional: statistical tests and models with R)

Day 4: Bring your own data

# The Workshop: Schedule and Organization

 9 a.m. - 4 p.m. ( ~ 12 a.m. - 1 p.m.)

 We will meet in the `General` meeting on Webex

## Organization

- Input sessions
  - Presentation and demonstration of a topic
  - Some examples
- **Tasks** regarding this topic
  - Solve them in small groups
- **Joint discussion** of tasks and additional questions

# The Workshop: Material

- All material can be found on the [workshop's website](#)
  - Presentations
  - Tasks
  - Solutions
  - Additional resources
- The complete material can be downloaded from the website after the workshop
- 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 on using R for your 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



# Bring your own data

- Keep the last workshop day in mind during the next days
  - Remember if you learn something that might be applicable to your data
  - Think of questions that you would like to answer for your data set
- 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
- All questions and comments are welcome
- Feedback is welcome
  - Evaluation at the end of the workshop
- Do you want to record the input sessions?
  - Someone needs to be responsible for that

# Before we get started II

## How to use Webex teams

- `General` channel for our joint meetings and chat
- `Groups 1-4` for group work
  - Group spaces have their own chat and meetings
  - Use the chat in the groups for questions
  - Meet in your groups and solve the tasks jointly (if you want)
- Please always have a look at the general chat during the tasks

# Before we get started III

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>