



# Workshops

Expand your skillset with engaging teachers  
and courses

# Our offer

- ◇ Focus on **key competences** for business and career development.
- ◇ Customised courses for both **individuals** and **companies**.
- ◇ **Experiential approach, hands-on** exercises - learn by doing.
- ◇ **Professional** trainers with years of practical experience.
- ◇ Material constantly reviewed and suited to **different audiences**.
- ◇ Open source tools used
- ◇ Attractive offers:
  - ◇ Early bird discounts
  - ◇ Discounts for multiple workshops
  - ◇ Discounts for multiple people

## Public Workshops

We organize [public workshops](#) for various technologies.

## Private Workshops

We deliver tailored workshops by customizing content and use cases to your needs.

# Mastering Git and GitHub

## Version control for collaborative, safe development

Never fear to mess up your code again, to lose your development or to spend endless time to integrate a collaborator's work.

Learn how to systematically store different versions of your code, recover a past status and safely integrate changes. Manage it all from command line, RStudio or a web browser

### IS THIS WORKSHOP FOR YOU?

Yes, this workshop is for everyone. Minimal experience with R and RStudio beneficial but not required.

- ◇ Integrating Git, GitHub, R and RStudio
- ◇ Basic Git actions from command line, R and Rstudio.
- ◇ Merging code versions
- ◇ Solving Conflicts
- ◇ Revert history safely
- ◇ Pull Requests and releases



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**DISCOUNT**

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### CUSTOM THIS WORKSHOP!

- \* Do you want a customized learning experience?
- \* Do you want a workshop tailored for you and your team?

# Introduction to R

## Enhance your data science toolkit!

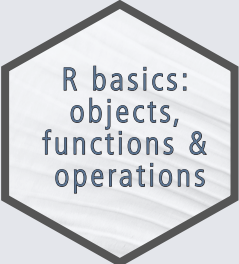
Are you looking for an effective and professional introduction to R? Get your way around R for absolute beginners. Build the basics of R programming from absolute scratch and get solid foundations for future learning.

Explore the full potential of the R language by building for yourself a good understanding of objects, common functions and basic operations.

### IS THIS WORKSHOP FOR YOU?

Yes, no previous experience with R required.

- ◇ Discover R & its opportunities
- ◇ Install Rstudio & install packages
- ◇ How to get help?
- ◇ Using functions for performing operations
- ◇ Explore vectors & matrices, lists & data.frames
- ◇ apply family
- ◇ Import/Export & read data in R



R basics:  
objects,  
functions &  
operations

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# Gaining insight from data

## Readable data analysis for everyone.

Data analysis has never been so simple!

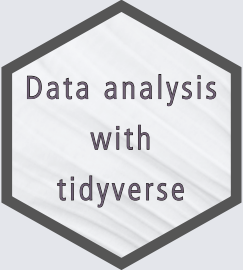
Become professional at writing readable efficient code for data manipulation using the **tidyverse** framework.

Understand how to subset, modify, join, and summarize your dataset, and learn the best techniques for gaining insight from your data and enable decision-making.

### IS THIS WORKSHOP FOR YOU?

Yes, no previous experience with R required but it is beneficial.

- ◇ Introduction to the tidyverse framework
- ◇ The pipe operator ``%>%``
- ◇ ``dplyr`` common functions: ``mutate``, ``filter``, ``summarize`` & more
- ◇ Analyze grouped data
- ◇ Convenience functions ``n``, ``slice_*``, ``distinct`` and more
- ◇ Joining, pivoting and unpivoting
- ◇ ``tidyr`` for condition based rule



Data analysis  
with  
tidyverse

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# Programming R

## Start thinking like a programmerR

Enhance your R skills, write algorithms into R functions, apply them in your data analysis. Enlarge your capabilities with R, learn the most efficient techniques.

For robust, maintainable and readable code! Become an R programmer and include common software development practices in your development process.

### IS THIS WORKSHOP FOR YOU?

Yes, if like to write your own algorithms efficiently in R.

- ◇ Write your own R functions
- ◇ Conditional execution in base R and Tidyverse
- ◇ Explicit looping and apply family
- ◇ Make code more efficient with vectorization
- ◇ Structure and modularize your code
- ◇ Debugging and logging strategies



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### CUSTOM THIS WORKSHOP!

- \* Do you want to make your own code more professional?
- \* Do you want a workshop tailored for you and your team?

# Becoming an R developer

## Becoming an R developer

Professionalize the way you work with R and pave your way towards a production-ready code.

For robust, maintainable and sharable code!

Make the transition from R user to R developer and share an R package within your team using Version Control and GitHub repository.

### IS THIS WORKSHOP FOR YOU?

Yes, if you want to know all about building an R package

- ◇ Build an R package locally
- ◇ Document it with roxygen tags
- ◇ Write unit tests and check package consistency
- ◇ Control dependencies with renv
- ◇ Connect your code to Git version control
- ◇ Safely deploy to a GitHub repository
- ◇ Implement CI with GH Actions and apply Gitflow collaboration



Build an R  
package, test,  
deploy

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# Build your first Shiny app

## Empower your data through Shiny visualization

Would you like to provide interactive visualization and data exploration features to business users who do not have R and data science skills?

Give yourself a boost for data driven decision making!

Discover how easy it can be with shiny to develop an application for both prototyping and productive use, without relying on web development or external BI tools!

### IS THIS WORKSHOP FOR YOU?

Yes, if you have been introduced to R – no need of HTML or Javascript.

- ◇ Become familiar with the structure of a shiny app
- ◇ Understand reactivity and how it is used in Shiny
- ◇ Discover Shiny input widgets
- ◇ Render outputs tables & plots according to user input
- ◇ Show output on demand, include download
- ◇ Develop your first app in R Shiny



My first  
Shiny App

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### CUSTOM THIS WORKSHOP!

- \* Do you want to get started with Shiny using your own data?
- \* Do you want a workshop tailored for you and your team?



# Improve your R-Shiny skills

## Make a Shiny App sparkle

Have you created your first Shiny app and would you like to bring it to the next level, customize it and make it more accessible to users?

Discover how to improve the User Interface for a more professional look, and learn how to better organize the content to derive insight more easily.

### IS THIS WORKSHOP FOR YOU?

Yes, if you have been introduced to R and R Shiny – no need to know HTML, CSS or Javascript

- ◇ Apply easy customization of Shiny elements aesthetics
- ◇ Explore different UI structure, layouts and organization
- ◇ Use CSS customization & HTML
- ◇ Experiment with other Shiny-related packages
- ◇ Discover dashboard layout



Make your  
Shiny App  
shine

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### CUSTOM THIS WORKSHOP!

- \* Do you wish to improve the aesthetic of your Shiny App?
- \* Do you want to address specific UI concerns for your App?

# Advanced Shiny Development

## Dig deeper into professional Shiny development

Do you know how to build a basic shiny web application, but would like to deepen your shiny development knowledge and learn how to work with shiny in a professional way? This is the place for you!

Learn the best practices from experts who use Shiny in enterprise on a daily basis.

### IS THIS WORKSHOP FOR YOU?

Yes, if you have been introduced to R and R Shiny – no need to know HTML, CSS or Javascript

- ◇ Package your Shiny project with `golem`
- ◇ Structure your App into modules
- ◇ Explore dynamic UI
- ◇ Gain an overview of different testing approaches for a Shiny App
- ◇ Get a first intro on best practices like dependencies control and automation

Advanced Shiny  
development

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### CUSTOM THIS WORKSHOP!

- \* Do you need to add specific functionalities to your own Shiny App?
- \* Do you want to professionalize your Shiny code?

# Bring a Shiny App to production

## Safe, agile & automated deployment

Do you want to learn the best way to bring a Shiny App safely to production

Do you intend facilitating collaboration and maintaining high quality standards through (automated) testing and automated processes?

Discover how R Shiny can be used professionally in enterprise!

### IS THIS WORKSHOP FOR YOU?

Yes, if you have been introduced to R & to R Shiny

You will need a GitHub account, create one if you don't have it yet.

- ◇ Use best development practices (version control, modularization, package structure and testing)
- ◇ Control dependencies with `renv`
- ◇ Automate CI/CD with GitHub Actions
- ◇ Create branches, including branch protection
- ◇ Apply gitflow in a collaborative setup

Bring a  
Shiny App to  
production

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### CUSTOM THIS WORKSHOP!

- \* Do you need support to bring your Shiny App to production?
- \* Do you want your team to collaborate on the same app safely?

# Who we are

## Mirai Solutions

- ◇ **Swiss**-based consulting company
- ◇ **Interdisciplinary** and multi-national team
- ◇ Extensive **specialist knowledge** (mathematics, statistics and economics) with **professional experience** in financial services, software engineering and IT architecture
- ◇ Wide teaching expertise in courses, workshops and individual training engaging various audiences

## Our Expertise

- ◇ Data Analytics
- ◇ Modeling
- ◇ Software Development
- ◇ DevOps
- ◇ Training

## CONTACT US

**We look forward to hearing from you**

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of our courses and services  
visit our website  
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