

We >R a community

ITP6: International Symposium:
Current Trends in Modelling and Software Development in Data
Science and Statistics (ISDSS)

Ziv Shkedy
Hasselt University, Belgium

ISDSS 2025
29/06/25-05/07/25
Pretoria, South Africa



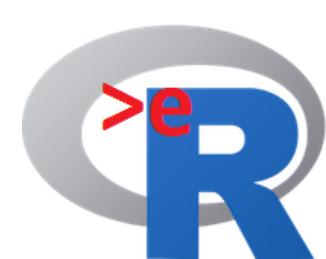
Visit us on
Facebook

ER-BioStat

<https://erbiostat.wixsite.com/erbiostat>

GitHub <https://github.com/eR-Biostat>

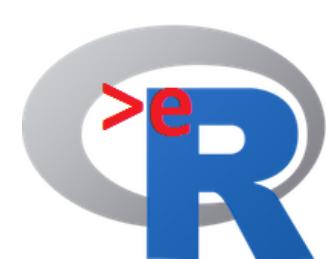
twitter @erbiostat



Interuniversity Institute for Biostatistics
and statistical Bioinformatics



Not such a short introduction



The >eR-BioStat : short introduction about the ITP collaboration project

Our new website

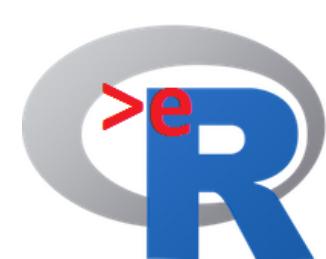
<https://erbiostat.wixsite.com/erbiostat>



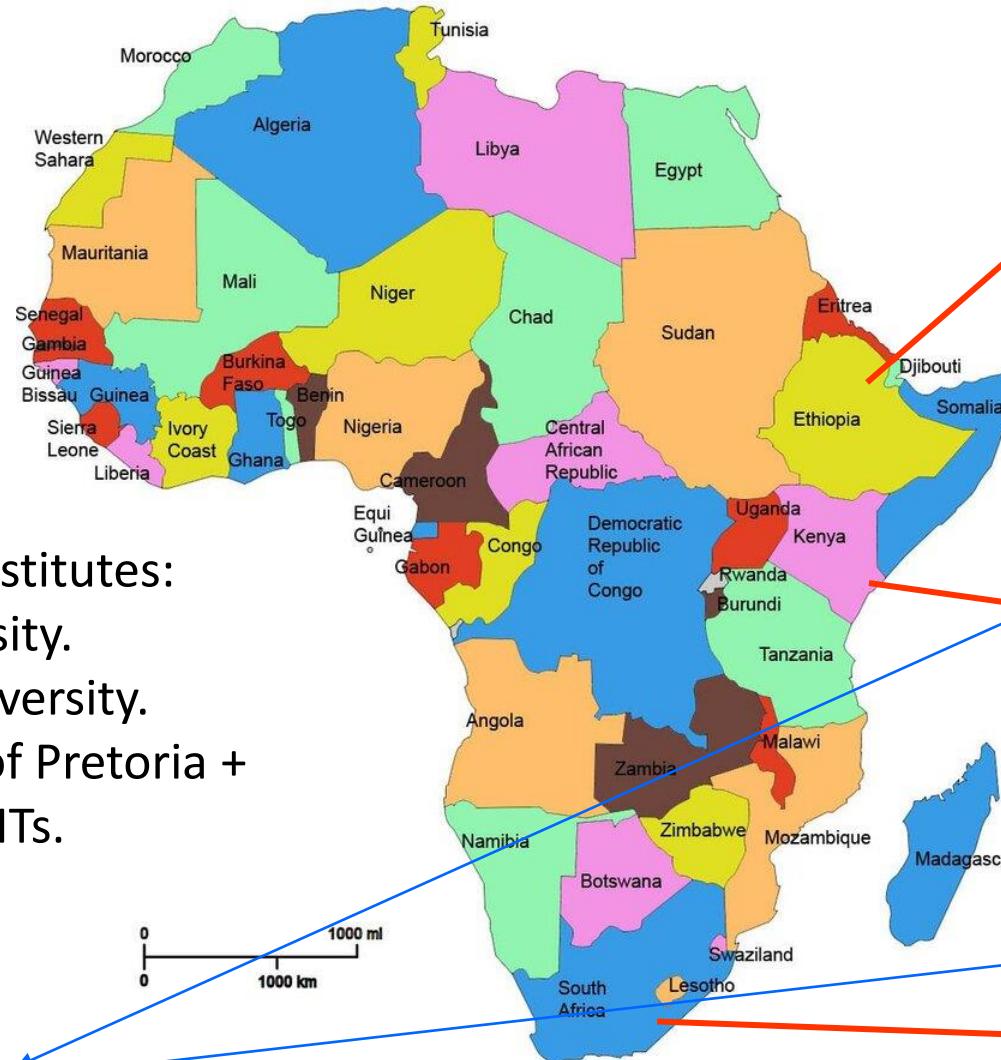
Project's structure

- Three years project.
- Three countries:
 - Kenya.
 - Ethiopia.
 - South Africa.
- In total: 14+ Universities & institutes from the three countries.
- International team: USA, Canada Belgium.
- Institutes from other countries are most welcome to join the project !!!





Project's partners

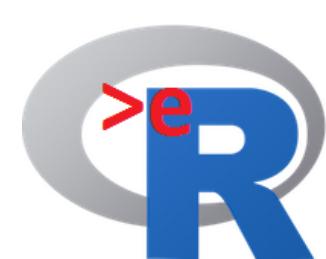


Gondar University.
Ambo University,
Debre Berhan University
Arba Minch University.
+others....

Moi University.
Karatina University.
JKUAT.
Masinde Muliro Uni.

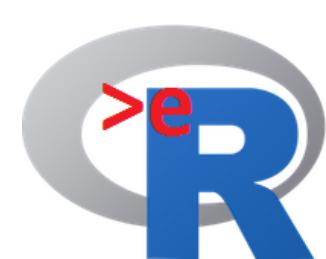
University of Pretoria.
MRC-SA.
WITS.
Stellenbosch University.
The University of Venda.
The University of Zululand.

Also partners
in SSACAB



Project's focus

- ITP: International Training Program.
- Focus: Development of (local) E-learning and digital education platforms for (bio)statistics & data science.
- Project's duration: 2024-2026.
- **WE DO NOT DEVELOP A DISTANCE LEARNING PLATFORM !!!**
- We target all levels (in stat & data science) of HE:
 - Undergraduate.
 - Graduate.
 - Courses for PhD schools.
 - Service courses for non statisticians.



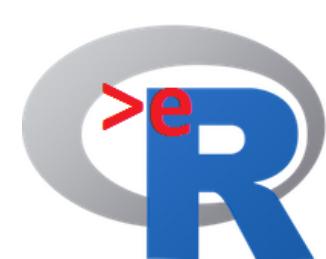
Project's objectives

- Development of (**local**) networks of universities in Kenya, Ethiopia, South Africa that use the digital platform for statistics & DS.
 - Training of local academic staff to create their own contents & websites.
 - Establish international network to support local universities.
-
- The project designed to support young academic staff in universities with education programs in statistics & DS.
 - All deliverables are available online (for free).



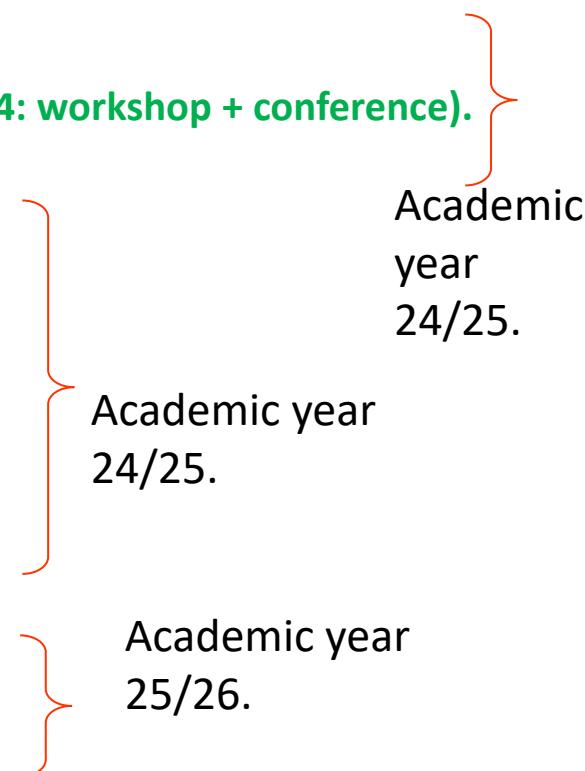
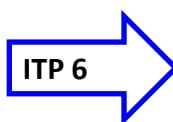
Project's deliverable

- A Local version of the >eR-BioStat website.
- Updated global version of <https://erbiostat.wixsite.com/erbiostat>.
- “Editorial board” for the website.
- A Local version: we would like to develop (1) a SSACAB version of the platform and (2) a SSACAB partner(s) local version.
- See some examples later.



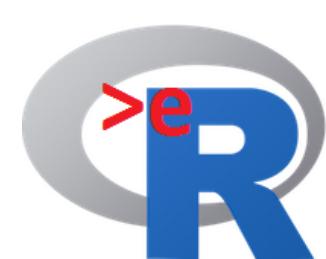
Project's activites

- Three academic years: 23/24, 24/25 & 25/26.
- Workshops:
 - ~~First workshop: Gondar Uni, Ethiopia (14/08/2023).~~
 - **Second workshop: SA-MRC, cape town (end of February 24: workshop + conference).**
 - ~~Third workshop: Moi.~~
 - **VISAYAS state university: the Philippines.**
 - **Hanoi Medical University, Vietnam.**
 - **Moi Uni, Kenya.**
 - **University of science and technology, Hanoi, Vietnam.**
 - Uni. of Pretoria, South Africa.
 - Moi University, Kenya.
 - SUSAN 2025.
 - ...
 - ...
 - ...



The ITP project's website:

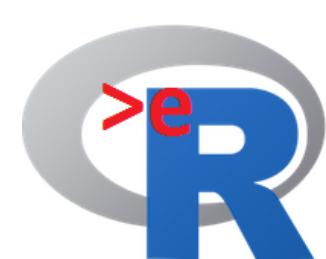
<https://erbiostat.wixsite.com/itpa0>



The >eR-BioStat : a short introduction and main concepts

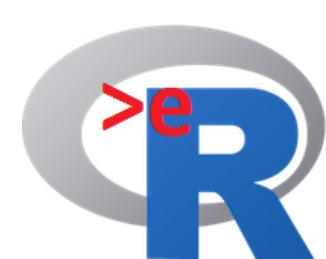
Our new website

<https://erbiostat.wixsite.com/erbiostat>



Digital education & E-learning

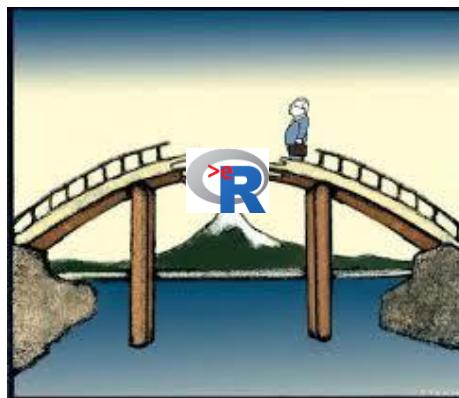
- We **DO NOT** develop online education program but we develop **online materials for on campus** education.
- The E-learning Initiative aims to **support on campus programs** by:
 - Develop accessible course materials in (bio)statistics.
 - Focus on **all education levels**:
 - Undergraduate & master programs, PhD schools.
 - Statisticians & non statisticians.
 - Bring students and teachers costs to minimum by providing **free, high quality and applied** course materials.



We >^eR a community

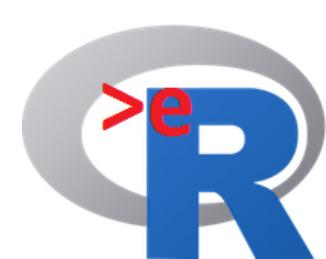
- Build up communities (in south & north).
- Create a bridge between communities:

Academic staff and students in the south.



Development of E-learning capacity

Academic staff in the south & north.



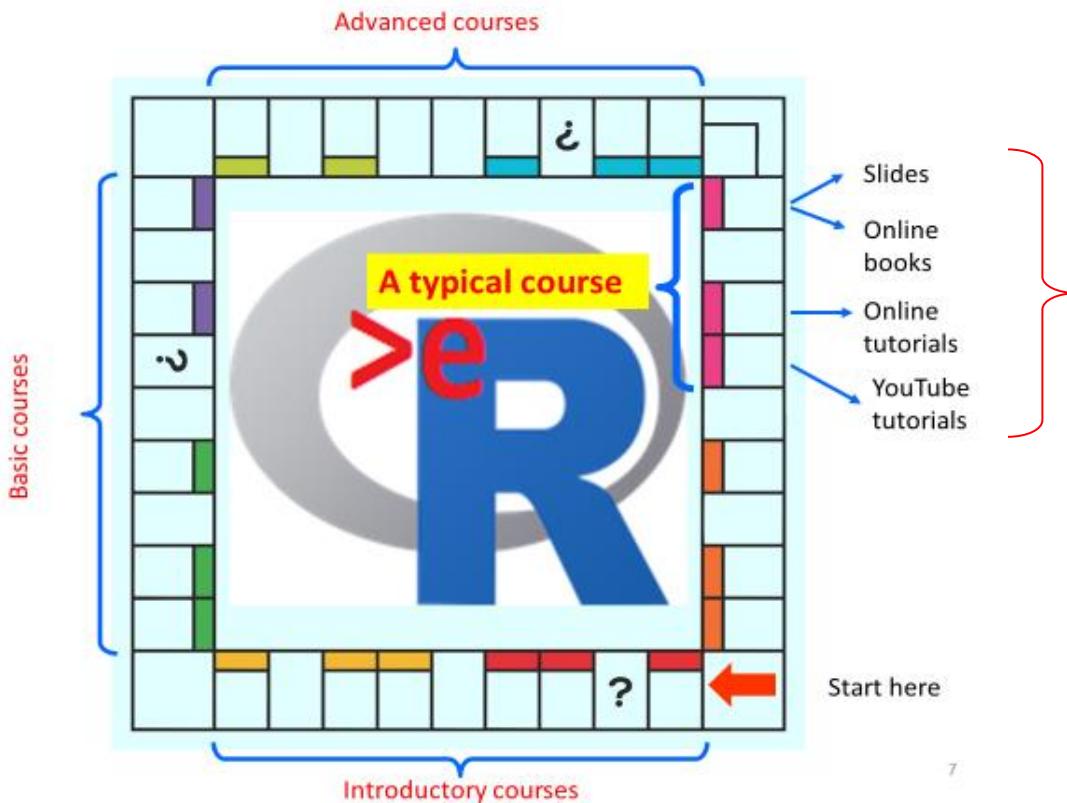
Concepts

- The E-learning system consists of few components:
 1. All course materials are available to the students/teachers online to download (for free).
 - Can be used **online or offline**.
 2. Selected courses (in stat & data science) were/will be developed.
 3. Courses can be used either as a complete course or a part of a course or a short course.
 4. Courses developed up to a class level, i.e. courses are ready to be given in the class.



Typical course structure

- Courses in three levels: introductory, basic & advanced.
- What does it means “fully develop a course...” ?



- Course materials are ready to be used in class.
- **Open source policy !!!**



Our approach (1): free and publically available

- **Reduce costs to zero !!!** ➔ **Very relevant these days !!!!!**
- Use publicly available products:

- Storage course materials: GitHub (<https://github.com/>).
- Website development: WIX (<https://www.wix.com/>).
- Software: mostly publicly available software.
- For example:
 - R (<https://www.r-project.org/>).
 - Python (<https://www.python.org/>).



All publicly
available
products.



- Free for users(=students/teachers in the south):
 - No password.
 - No registration.

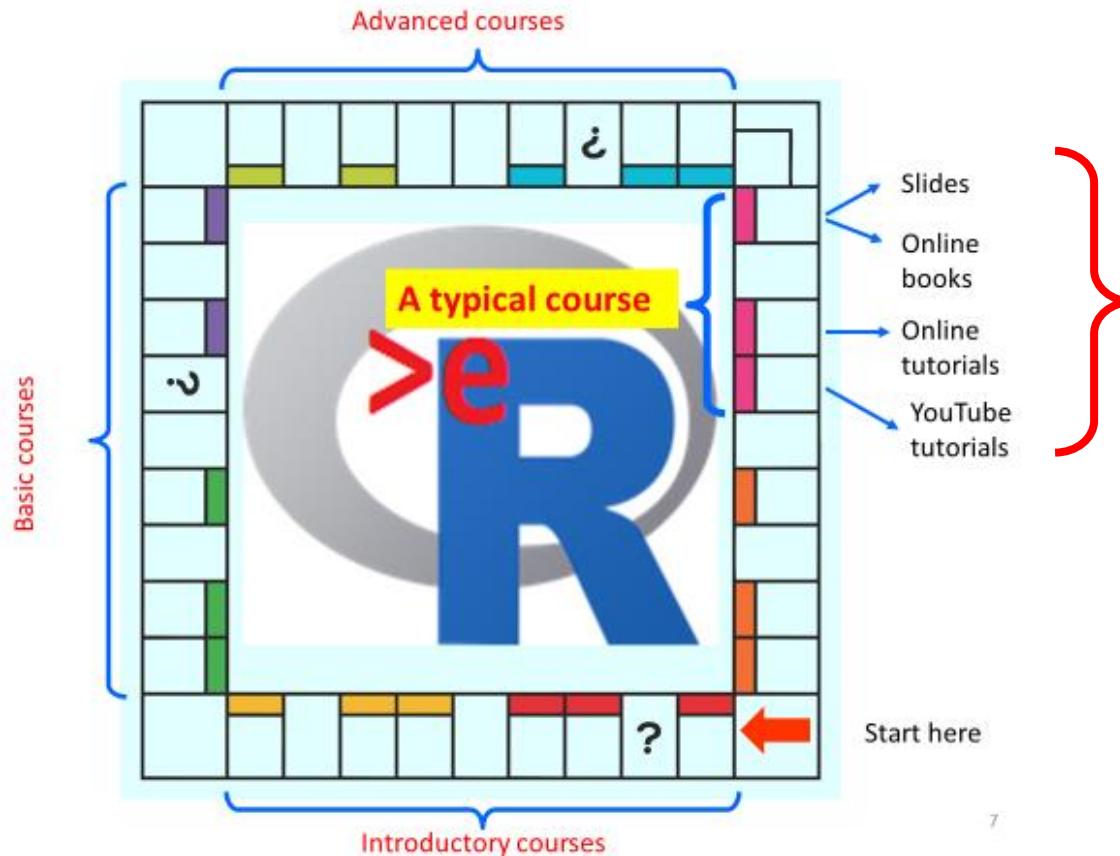


Our approach (2): open source

- For a given course, everything is available for free:
 - Slides for the class (pdf).
 - Source files to make the slides (PP, Tex, Rmd...) !!!
 - YouTube tutorials.
 - Software programs for the examples in the course.
 - **Free** for users:
 - No password.
 - No registration.
 - 100% sustainable !!!
-
- All publicly available.
- In the workshop we train the participants:
 - How to use the source files.
 - How to create their own version of the source files.
 - → Local version of the course.

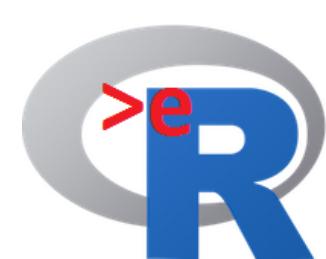


Our approach (3): Communities



- All source materials are available for **FRRE** online.
- Everybody can download and use.
- Course materials **can be adapted** by the users for the local needs.

- Communities of users: students & teachers in the south &
- Communities of developers: in both south & north.



The >eR-BioStat : where to find us ?

Our new website

<https://erbiostat.wixsite.com/erbiostat>



We R online

- We provide **an online and free** platform:

<https://erbiostat.wixsite.com/erbiostat>

The screenshot shows a browser window with the URL erbiostat.wixsite.com/erbiostat. The page features a header with the >eR-BioStat logo, a navigation menu with links to Home, We R a community, Our platform, Our courses, Gallery, Developers, and Blog. A green "Log In" button is also present. The main content area includes a welcome message about the 2020 edition of the initiative, a large image of a presentation slide on a projector screen, and a "CHAT WITH US" button at the bottom right.

Welcome to the 2020 edition of the >eR-BioStat initiative website. We are a part of the open-source movement and we offer free courses in statistics. If you are a teacher that needs to give a course in statistics or a student that studies a course in statistics, we are the address. Just **click** on the link, **download** the materials (for free) and **teach** (yourself) in the class. In the next few weeks, we will update and refresh our curriculum. If you want to be updated, follow us on social media and follow our blog. All our courses, as before, are available online in our [Github page](#).

The >eR-BioStat initiative
Making R based education materials visible
and accessible to all

We R a community: the >eR-BioStat initiative
Dr. Ir. Idéle Adriaenssens, Koen Mengelkoch, Femke A. Tielman, Anneke Hasselt University, Belgium, Durban University of Technology, South Africa
And
Gordon Denyer, Ethiopia

Email: erbiostat@gmail.com

Facebook: [erbiostat](#) | Twitter: [erbiostat](#) | LinkedIn: [erbiostat](#)

2/2

CHAT WITH US

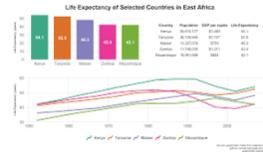


Open source

Inbox (4,678) - ziv.shkedy@uhasselt.be | Home | Erbiostat | erbiostat.wixsite.com/erbiostat | Apps | uhasselt.be bookmarks

This site was designed with the WIX.com website builder. Create your website today. [Start Now](#)

Our platform



Our courses

We offer courses at different levels. **The green courses** are developed at an introductory level. Only basic level knowledge of statistics and R is required. These courses were developed for both non statisticians and statisticians. The courses within this cluster can also be used as courses to support R usage in undergraduate program in biostatistics/statistics. **The blue courses** are developed at a basic undergraduate level in statistics. A basic level knowledge of statistics and R is required at the beginning of the course. The courses aim to teach the students basic topics on specific subjects. **The orange courses** are more advanced and are focused on basic statistical modeling and inference methods at a master level.

Courses' structure

We offer few course structures, all of them were developed up to a class level course. Typically, a course in the >eR-BioStat platform consists of:

- Slides.
- R programs for the examples discussed in the slides.
- Datasets.
- YouTube tutorials.

Open source

Our **open source policy** means that course materials, slides, programs for the examples discussed in the courses, are available for you. In some courses, source files for the presentations/course notes are available in PowerPoint or markdown files. Our aim is to have, as much that it is possible, a complete open source curriculum by the end of 2022.

Courses marked with red sticker are fully open source.

Courses marked with blue sticker are under development and not presented in their final version.

CHAT WITH US

Type here to search

25°C Zonnig

ENG US 16:17 03/09/2021

- We provide the source files for the courses:
 - PPT/Tex/Rmds for slides.
 - Rmds and R programs.



Our courses

- Courses in three levels:
 - Introductory.
 - Basic.
 - Advanced.

The screenshot shows a Wix website for 'erbiostat'. The header includes the eR logo, the title 'Our courses', and a 'Start Now' button. The main content is organized into three sections: 'Introductory', 'Basic', and 'Advanced', each listing several course titles. A 'CHAT WITH US' button is located in the bottom right corner of the page area.

Introductory	Advanced
Introduction to R	Applied Generalized Linear Models (GLM) using R
Statistical modeling: Linear regression using R	Modelling Binary Data using R
Statistical modeling: One-way ANOVA using R	Longitudinal data analysis (LDA) using R
Statistical modeling: Logistic regression using R	Linear models using R
Vizualizing data using R: an introduction	Survival Analysis using R
Basic concepts of statistical inference using R	An introduction to bootstrap using R

Basic
Basic concept in statistical inference using R (1)
Basic concept in statistical inference using R (2)
Linear Regression using R

- Target for September-December 2027: all courses are ready to be given in class.
- To select a course: click on the course name.



Our courses: users

- Can be used:
- Applied part in undergraduate courses in stat & data science.
- Courses for non statisticians.

The screenshot shows a website titled "Our courses" designed with WIX.com. The page is organized into three main sections: "Introductory", "Advanced", and "Basic". A red curly brace on the left side groups the "Introductory" and "Basic" sections together, indicating they are intended for non-statisticians or undergraduate students.

Introductory	Advanced
Introduction to R	Applied Generalized Linear Models (GLM) using R
Statistical modeling: Linear regression using R	Modelling Binary Data using R
Statistical modeling: One-way ANOVA using R	Longitudinal data analysis (LDA) using R
Statistical modeling: Logistic regression using R	Linear models using R
Vizualizing data using R: an introduction	Survival Analysis using R
Basic concepts of statistical inference using R	An introduction to bootstrap using R

Basic
Basic concept in statistical inference using R (1)
Basic concept in statistical inference using R (2)
Linear Regression using R

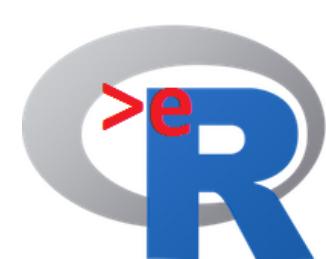
CHAT WITH US

Waiting for engage.wixapps.net...

Type here to search

17:00 12/03/2023 ENG

<https://erbiostat.wixsite.com/erbiostat>



The >eR-BioStat : example of one course Introduction to R

Our new website

<https://erbiostat.wixsite.com/erbiostat>



Example: introduction to R

The screenshot shows a website for 'erbiostat' featuring a navigation bar with links for Home, About, Services, Portfolio, Contact, and Log in. Below the navigation is a search bar and a sidebar with 'uhasselt.be bookmarks'. The main content area has a header 'Our courses' and three sections: 'Introductory', 'Basic', and 'Advanced'. Each section contains a list of courses with small circular icons next to them. A large red arrow points to the 'Introductory' section.

Our courses

Introductory

- Introduction to R
- Statistical modeling: Linear regression using R
- Statistical modeling: One-way ANOVA using R
- Statistical modeling: Logistic regression using R
- Vizualizing data using R: an introduction
- Basic concepts of statistical inference using R

Basic

- Basic concept in statistical inference using R (1)
- Basic concept in statistical inference using R (2)
- Linear Regression using R

Advanced

- Applied Generalized Linear Models (GLM) using R
- Modelling Binary Data using R
- Longitudinal data analysis (LDA) using R
- Linear models using R
- Survival Analysis using R
- An introduction to bootstrap using R
- Sample size calculation using R
- Exploratory multivariate data analysis using R
- Survival Analysis using R (A)

CHAT WITH US

<https://erbiostat.wixsite.com/erbiostat>



Example: introduction to R

The screenshot shows a web browser window with three tabs open:

- Inbox (4,678) - ziv.shkedy@uhasselt.be
- wix Home | Erbiostat
- wix Home | Rintro (The active tab)

The main content area displays the 'Introduction to R' website built with WIX.com. The page includes:

- A large stylized R logo at the top.
- The title "Introduction to R" and subtitle ">eR-BioStat".
- A navigation bar with links: Home, About, Topics (circled in red), Online book, Contact.
- A text block describing the course as an introductory course to R, mentioning topics like two-sample t-test, basic plots, and statistical modeling.
- A screenshot of an R console window showing command-line interaction and an R Graphics Device 2 plot showing a scatter of data points.
- A footer note: "The course was developed as a introductory level course."

<https://erbiostat.wixsite.com/rintro>



Slide format (in “Topics”)

The course is organized in 4 chapters:

- A quick start.
- Basic programming in R.
- First steps in statistical modeling in R.
- Selected topics in modeling.

R functions that are used for illustrations include:

- mean()
- median()
- var()
- quantile()
- range()
- min()
- max()
- cor()
- tapply()
- hist(x)
- plot(x)
- boxplot(x)
- aov(m~x), glmc
- lm(x~y)
- quantile(x)

Quick start

If you are new to R and never used it before, this part of the course will give you a quick overview what to expect from the software. It is a very intuitive part. R knowledge is not required but we assume a basic knowledge of statistics. We will show how to do a t-test (what a t-sample test is, ...). Topics that we cover in this chapter include:

- Sampling from a normal distribution.
- Working with data: the cars data.
- Two sample t-test.
- Basic plots.

Slides (part 1) A quick start

Modeling 2

The second chapter about statistical modeling presents the topics of

- Two-way ANOVA.
- Advance topics about linear regression.

Slides (part 4): statistical modeling 2

R program for the course

R program that contains the code to produce all the results discussed in the course.

R program

Basic programming in R

In this chapter we discuss basic topics in R programming from a user point of view. This part is developed to give you the basic skills that you need for an advanced usage of R. The topics that we cover in this chapter include:

- Basic programming in R: objects in R
- Reading external datasets
- Programming with a for loop
- Programming in R: user functions
- Application of a for loop: bootstrap.

Data sets

- The course in a usual slides format:
 - Slides (PDF).
 - Slides (Power point).
 - R program to produce the results presented in the slides.



Slide format (PDF)

Home | Erbiostat Topics | Rintro Courses/eR-Biostat_An Introduction to R_QuickStart.pdf

github.com/eR-Biostat/Courses/blob/master/Introductory%20Courses/Introduction%20to%20R/Slides/eR-Biostat_An%20Introduction%20to%20R_2017_QuickStart.pdf

Apps uhasselt.be bookmarks Reading list

The screenshot shows a web browser window displaying a PDF document from GitHub. The title bar indicates the document is about an introduction to R. The main content of the PDF is visible, featuring the eR logo, a mission statement, the title 'An introduction to R: Short Version (2017)', and 'Part 1: a quick start'. It also credits Dan Lin and Ziv Shkedy from Hasselt University and includes a 'LAST UPDATE: 15/10/2017' box. The browser interface includes tabs for 'Home', 'Topics', and 'Courses', and various browser controls like back, forward, and search.

The >eR-Biostat initiative
Making R based education materials in statistics accessible for all

An introduction to R: Short Version (2017)

Part 1: a quick start

Developed by
Dan Lin (Hasselt University) and Ziv Shkedy (Hasselt University)

LAST UPDATE: 15/10/2017



Online book

This site was designed with the **WIX.com** website builder. Create your website today. [Start Now](#)

Introduction to R

>eR-BioStat

This course is an introductory course to R and can be given as a one/two-days workshop or as a course of 2-3 classes (3 hours per class). All topics in the course are presented at a basic level. Only a limited knowledge in R is required. Topics covered in the course include:

- Two sample t-test.
- Basic plots
- Basic programming in R: objects in R
- Reading external datasets
- Basic plots functions
- Programming in R: a for loop
- Statistical modeling in R: simple linear regression
- Statistical modeling in R: one-way ANOVA
- Statistical modeling in R: logistic regression
- Programming in R: user functions
- Two-way ANOVA
- Application of a for loop: bootstrap.
- The tidyverse package.

The course was developed as a **introductory level** course.

R version 3.6.1 (2019-05-16) -- "Good Sport"
Copyright (C) 2019 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/v4.0 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.
R is a trademark of The R Foundation for Statistical Computing.
Type 'citation()' for further information on R.
Type 'help()' for help, 'demo()' for demonstrations,
'start()' or 'rstudio()' for help with RStudio.
Type 'q()' to quit R. Use 'ctrl-Shift-F10' to hold.

Errors had occurred for regular number (file may be corrupt)
in file 'C:\Users\zivshkedy\OneDrive\Bureau\R\airquality.RData'
file 'airquality.RData' has magic number "4D34" (was expected "4D33")
Using RStudio - Warning message
warning: package 'gridExtra' was built under R 3.6.0
* Using RStudio - Warning message
warning: package 'gridExtra' was built under R 3.6.0
* Using RStudio - Warning message
warning: package 'gridExtra' was built under R 3.6.0

50 100 150
sootInS ozone
0 5 10 15 20
airquality\$Wind

Rfig

Windows Taskbar: Type here to search, File Explorer, File Manager, Google Chrome, Microsoft Edge, Mail, etc.

System tray: 25°C Zonnig, Battery icon, ENG US, 16:20, 03/09/2021, 2 notifications.



Online book

The screenshot shows a Microsoft Edge browser window displaying an online book titled "Introduction to R: basic programming". The page content includes a sidebar with navigation links for chapters 1 through 3, and a main area with sections like "1 Introduction", "1.1 Slides, code and tutorials", and "1.2 R ?". A code snippet and a warning message are also visible. The browser's address bar shows the URL of the book's page. The taskbar at the bottom shows various pinned icons and the system tray with battery, signal, and date/time information.

Inbox (4,678) - ziv.shkedy@uhasselt.be | Home | Erbiostat | Online book | Rintro | Introduction to R: basic programming

Not secure | htmlpreview.github.io/?https://github.com/eR-Biostat/Courses/blob/master/Introductory%20Courses/Introduction%20to%20R/Onlinebook/Rintro_Prog-html-_V1.html

Apps | uhasselt.be bookmarks | Reading list

Introduction to R: basic programming

First steps of programming in R (July 2020)

```
## Warning: package 'mvtnorm' was built under R version 3.6.2
```

1 Introduction

1.1 Slides, code and tutorials

This chapter of the interactive book contains all R code that was used to produce the results and output presented in chapter 2 (programming) in the course's slides. We include YouTube tutorials as a part of the chapter and links to the relevant tutorials are provided in different sections. Note that these tutorials were not developed especially for this book, they cover the same topics using different examples.

1.2 R ?

No previous knowledge about R is required. We start from the basic and follow a user approach and not a programmer approach. The datasets used for illustrations are available in R, one of them (the law school data) is part of the R package. To run the code smoothly, this package need to be installed.

```
library(bootstrap)
```

1.3 Slides

Ziv Shkedy
Hasselt University, Belgium
May, 2020

Type here to search

25°C Zonnig 25°C Zonnig ENG US 16:21 03/09/2021

- Available in
 - HTML.
 - PDF.
 - Rmd to reproduce the book on your laptop.



R course: users in the last 365 days

13/03/2022-12/03/2023:605 users.

wix Traffic Overview | Wix.com manage.wix.com/dashboard/56903fff-37f1-44c5-a038-af35caa1ae05/analytics/overviews/traffic?referralInfo=sidebar uhasselt.be bookmarks ziv.shkedy@uhasselt.be

WIX Rintro Explore Help Hire a Professional Upgrade Search for tools, apps, help & more... 3 2 1 ziv.shkedy@uhasselt.be

Let's set up your business 1/4 completed

Home Activity Site & App Subscriptions Contacts Communications Automations Marketing & SEO Analytics & Reports

Traffic Overview Sales Overview Marketing Overview NEW Behavior Overview Reports Insights Benchmarks Site Speed Uptime & Security Alerts Email Updates Getting Paid Settings Quick Access

Traffic Overview Last 365 days (Mar 13, 2022 - Today) compared to previous period (Mar 13, 2021 - Mar 12, 2022)

1,115 ↑ 9% 605 ↑ 22% 4m 29s ↓ 11%

Sessions over time ~100 users are from my course.

Direct Facebook learn-eu-central-lackboardcdn.com Google Wix email marketing

Avg. sessions by day

New vs returning visitors Unique visitors 605

New 98% * 590 Returning 2% * 15

Sessions by device Site sessions 1,115

Desktop 71% * 789 Mobile 28% * 312 Tablet 1% * 14

How ?

See full report See full report See full report See all insights

17:06 ENG 12/03/2023



Who are our users? (Introduction to R)

13/03/2022-12/03/2023: 605 users.

wix Reports | Wix.com

manage.wix.com/dashboard/56903fff-37f1-44c5-a038-af35caa1ae05/analytics/reports/78e2a2cf-1255-4ff3-a143-5dcfa5e6f9cf?date=365+day&referralInfo=traffic-overview-page

uhasselt.be bookmarks

WiX Rintro Explore Help Hire a Professional Upgrade Search for tools, apps, help & more... 3 2 4 ziv.shkedy@uhasselt.be

Done viewing the report? Go back to traffic overview

Find out where visitors to your site come from. View report definitions

Time period: Mar 13, 2022 - Today

Country Map City Map Table

Save Report View

Time period: Last 365 Days Select a measure: Unique visitors Country: is any value Group by: City More + 25 just now

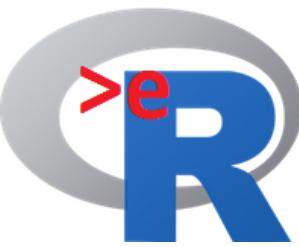
Map showing visitor locations worldwide, with a large cluster in Europe and another notable cluster in Ethiopia.

49 1

© Mapbox © OpenStreetMap Improve this map

Type here to search

Windows taskbar icons: File, Home, Google Chrome, File Explorer, Microsoft Edge, Task View, Taskbar settings, Network, Battery, Volume, ENG, 17:09, 12/03/2023, 2



Who are our users? (Introduction to R)

Last 365 days: **1558** users.

wx Traffic | Wix.com

manage.wix.com/dashboard/56903fff-37f1-44c5-a038-af35caa1ae05/analytics/overviews/traffic?referralInfo=sidebar

uhasselt.be bookmarks

WIX Rintro Explore Hire a Professional Help Upgrade

Quick Actions

Let's set up your business >

1/4 completed

Setup Home Getting Paid Sales Apps Site & Mobile App Inbox Customers & Leads Marketing Analytics

Highlights Real-time Traffic Behavior Marketing Session Recordings Insights Benchmarks All Reports Automations > Edit Site

Traffic Overview

Last 365 days (May 23, 2024 - Today) compared to previous period (May 24, 2023 - May 22, 2024)

Unique visitors 474 99% • 467 Returning 1% • 7

Site sessions 1,558 Mobile 10% • 157 Tablet 0% • 3

View Report View Report

View Report

Traffic insights

Your most popular traffic source is erbiostat.wixsite.com/erbiostat (Referral). See All Insights

Sessions by country

Japan > 497

Belgium > 468

Kenya > 104

Uganda > 98

Ethiopia > 53

South Africa > 37

My course in UHasselt

Users in Sub Saharan Africa



Who are our users? (Introduction to R)

wix Traffic by Location | Wix.com

manage.wix.com/dashboard/56903fff-37f1-44c5-a038-af35caa1ae05/analytics/reports/b57180f4-5777-4007-aa34-4ed4affcfb36?referralInfo=change_view

uhasselt.be bookmarks All Bookmarks

WIX Rintro Explore Hire a Professional Help Upgrade

Quick Actions

Let's set up your business >

1/4 completed

Setup

Home

Getting Paid

Sales

Apps

Site & Mobile App

Inbox

Customers & Leads

Marketing

Analytics

Highlights

Real-time

Traffic

Behavior

Marketing

Session Recordings

Insights

Benchmarks

All Reports

Automations

Edit Site

Done viewing the report? Go back to Traffic Overview

Subscribe Download

Country Map City Map Table

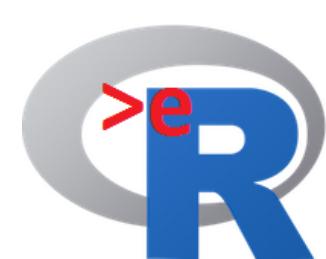
Users last month

Partners in the ITP

Keyboard shortcuts Map data ©2025 Google, INEGI 1000 km Terms

Type here to search

21:42 ENG 22/05/2025



Stay connected



- Network event (online) on **September 2025 & February 2026**.
- Aim: to establish collaboration network for research and education development in (bio)stat & data science.
- 09:00-12:30.
- Link for free registration: **TBA**
- Follow us on social media:



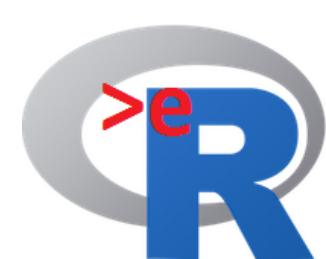
Visit us on
Facebook

ER-BioStat

&



@erbiostat



Stay connected



- Look for more examples & courses in our website:
<https://erbiostat.wixsite.com/erbiostat>
- Users:
 - Want to take part in our initiative ?
 - Want to include your university in our initiative ?
 - Want to use our courses for your classes ?
- Developers:
 - Want to contribute a course for this initiative ?
- Send us an email !!!

ziv.shkedy@uhasselt.be

- Follow us on social media:



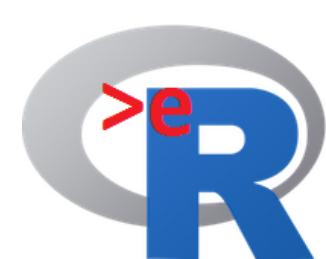
Visit us on
Facebook

ER-BioStat

&



@erbiostat



Global and local website ?

Our new website

<https://erbiostat.wixsite.com/erbiostat>



We R online: the global website

- We provide **an online and free** platform:

<https://erbiostat.wixsite.com/erbiostat>

The screenshot shows a browser window with the URL erbiostat.wixsite.com/erbiostat. The page features the >eR-BioStat logo at the top left. A navigation bar includes links for Home, We R a community, Our platform, Our courses, Gallery, Developers, and Blog. To the right is a user icon and a 'Log In' link. The main content area has a purple header: 'This site was designed with the **WIX**.com website builder. Create your website today.' with a 'Start Now' button. Below this, the text reads: 'Welcome to the 2020 edition of the >eR-BioStat initiative website. We are a part of the open-source movement and we offer free courses in statistics. If you are a teacher that needs to give a course in statistics or a student that studies a course in statistics, we are the address. Just click on the link, download the materials (for free) and teach (yourself) in the class. In the next few weeks, we will update and refresh our curriculum. If you want to be updated, follow us on social media and follow our blog. All our courses, as before, are available online in our Github page.'

The central part of the page displays a photograph of two people in a classroom setting, looking at a large screen that shows the same website content. A green 'CHAT WITH US' button is located in the bottom right corner.

At the very bottom, there is a Windows taskbar with icons for search, file explorer, and other applications. System status icons include battery level (25°C), signal strength, and system time (16:14, 03/09/2021).



We R online: the local websites

- Local website: Karatina University (Kenya) :

<https://erbiostat.wixsite.com/karadsa1>

The screenshot shows a Microsoft Edge browser window with the URL erbiostat.wixsite.com/karadsa1 in the address bar. The page is built on Wix, as indicated by the "WIX" logo at the top. The main content area has a white background with a yellow header bar containing the university's name and a "Get Started" button. Below this, there is a navigation menu with five items: "Home" (highlighted with a red oval), "About", "Basic in DS & A", "Advanced", and "Contact". A section titled "E-learning system: Data Science and Analytics" follows. To the right of this section is a logo for "KARATINA UNIVERSITY" featuring a stylized sunburst and a book. Below the logo is the tagline "Inspiring Innovation and Leadership". At the bottom of the page, there are three columns with links: "About", "Basic courses DS & A", and "Advanced courses in DS & A". The "Basic courses DS & A" column contains a link to "General information about the E-learning program in Data science and analytics, sources and course materials and the". The "Advanced courses in DS & A" column contains a link to "This page provides all information and links for advanced courses that are currently available as a part of the E-learning". The bottom of the screen shows the Windows taskbar with various pinned icons and the date/time.



We R online: the local websites

- Local website: Moi University (Kenya) :

<https://erbiostat.wixsite.com/moiel1>

The screenshot shows a web browser window with the URL erbiostat.wixsite.com/moiel1 in the address bar. The page is a Wix-built website for the Department of Mathematics, Physics and Computing, School of Science and Aerospace Studies at Moi University. The header includes a 'WIX' logo and a 'Get Started' button. Below the header, there's a navigation bar with links for Home, About, BioStat & DS, Health Science, and Contact. A section titled 'E-learning system: Biostatistics' is displayed, featuring a welcome message about the 2024 edition and a note about the collaboration with the >eR-BioStat initiative. To the right is the Moi University logo, which is circular with 'MOI UNIVERSITY' around the top and 'FOUNDATION OF KNOWLEDGE' at the bottom, featuring a book icon in the center. At the bottom of the page, there are three columns: 'About', 'Courses in Biostatistics', and 'Course in Epidemiology & Public Health'. Each column has a corresponding link below it. The footer contains standard browser icons and a small speech bubble icon.



University of Pretoria



Interuniversity Institute for Biostatistics
and statistical Bioinformatics



ITP 6: ISDSS 2025

Workshop's website

<https://erbiostat.wixsite.com/itp6>



ISDSS2025's website

WIX | This website was built on Wix. Create yours today. [Get Started](#)

HOME ABOUT Log In SCHEDULE VENUE CONTACT

University of Pretoria

DSI
DATA SCIENCE INSTITUTE
► UHASSELT

International Symposium:
Current Trends in Modelling and Software
Development in Data Science and Statistics
(ISDSS)

Organized jointly by the Department of Statistics,
University of Pretoria (South Africa) and Hasselt
University (Belgium)

Pretoria, South Africa
29/06/25-06/07/25

Workshop and short course, 29/06-02/07 & 05/07-06/07: We plan 6 courses:
(1) Recent developments in the design and analysis of clinical trials, (2) Dose
response modeling, (3) Statistical topics in vaccine development, (4) Bayesian
Small Area Estimation or Statistical Data integration, (5) Design and analysis of
pragmatic trials and (6) Development of E-learning platforms using R: an
introduction to the eR-BioStat platform & approach.

LET'S CHAT!

Type here to search ENG 17:34 24/06/2025

<https://erbiostat.wixsite.com/itp6>



Structure of the ISDSS2025 workshop

Day 1 29/06	Day 2 30/06	Day 3 01/07	Day 4 02/07	Day 5 03/07	Day 6 04/07	Day 7 05/07
Platform training	Stat & data science training	Stat & data science training	Stat & data science training	conference	conference	Platform training

+ Online meeting after the workshop

Scientific meeting

Running in parallel to the SYMSTAT2025

- First 3 days: training.
- Two days conference.
- Platform training.



The ISDSS2025 structure

HOME | ITP6 erbiostat.wixsite.com/itp6 uhasselt.be bookmarks All Bookmarks

WIX | This website was built on Wix. Create yours today. Get Started

NEW-CLICK HOME ABOUT Log In SCHEDULE VENUE CONTACT

The ISDSS workshop & conference is organized in parallel to the International Symposium on Modern Statistics and Biostatistics (SYMSTAT2025) in the University of Pretoria. For more details about SYMSTAT2025 look [here](#).

/ SCHEDULE

A link to all course materials are available [here](#).

29/06

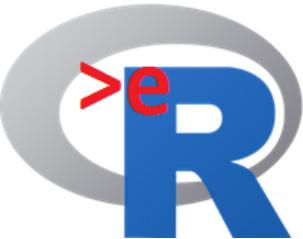
Sunday

12:00-13:00: Lunch.
13:00-14:30: Ziv Shkedy + Leyla Kodalci (UHasselt, Belgium) + Samuel Manda (Pretoria University, South Africa): [Introduction to the workshop + E-learning development](#).
14:30-15:00: Coffee break.
15:00-16:00: Ziv Shkedy + Leyla Kodalci (UHasselt, Belgium) + Samuel Manda (Pretoria University, South Africa): [Introduction to the workshop + E-learning development](#).

LET'S CHAT!

Type here to search

17:20 24/06/2025 ENG



Structure of the ISDSS2025 workshop

Day 1 29/06	Day 2 30/06	Day 3 01/07	Day 4 02/07	Day 5 03/07	Day 6 04/07	Day 7 05/07
Platform training	Stat & data science training	Stat & data science training	Stat & data science training	conference	conference	Platform training

+ Online meeting after the workshop



Javier Cabrera:

- Recent developments in the design and analysis of clinical trials.

Adetayo Kasim:

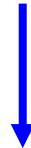
- Dose response modeling.



Structure of the ISDSS2025 workshop

Day 1 29/06	Day 2 30/06	Day 3 01/07	Day 4 02/07	Day 5 03/07	Day 6 04/07	Day 7 05/07
Platform training	Stat & data science training	Stat & data science training	Stat & data science training	conference	conference	Platform training

+ Online meeting after the workshop



Javier Cabrera:

- Recent developments in the design and analysis of clinical trials.

Adetayo Kasim:

- Dose response modeling.

Dan Lin:

- Enhancing First-Time-in-Human (FTiH) Trials through Integrated pharmaceutical Statistics: the Critical Role of Chemistry, Manufacturing, and Controls (CMC), Non-Clinical, and Translational Phases.



Structure of the ISDSS2025 workshop

Day 1 29/06	Day 2 30/06	Day 3 01/07	Day 4 02/07	Day 5 03/07	Day 6 04/07	Day 7 05/07
Platform training	Stat & data science training	Stat & data science training	Stat & data science training	conference	conference	Platform training

+ Online meeting after the workshop



Samuel Manda:

- Bayesian Small Area Estimation or Statistical Data integration.

Tarylee Reddy:

- Design and analysis of pragmatic trials.



Structure of the ISDSS2025 workshop

Day 1 29/06	Day 2 30/06	Day 3 01/07	Day 4 02/07	Day 5 03/07	Day 6 04/07	Day 7 05/07
Platform training	Stat & data science training	Stat & data science training	Stat & data science training	conference	conference	Platform training

+ Online meeting after the workshop



Leyla Kodalci + Ziv Shkedy:

- Introduction/summary to the workshop.
- Platform training + E-learning development.



Structure of the ISDSS2025 workshop

Day 1 29/06	Day 2 30/06	Day 3 01/07	Day 4 02/07	Day 5 03/07	Day 6 04/07	Day 7 05/07
Platform training	Stat & data science training	Stat & data science training	Stat & data science training	conference	conference	Platform training

+ Online meeting after the workshop



- Conference including joint sessions with SYMSTAT2025.
- 03/07: reception at 17:30.



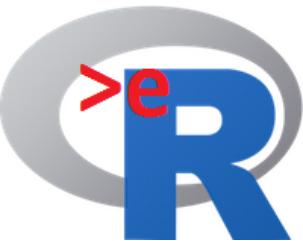
Interuniversity Institute for Biostatistics
and statistical Bioinformatics



Where to find the workshop's materials ?

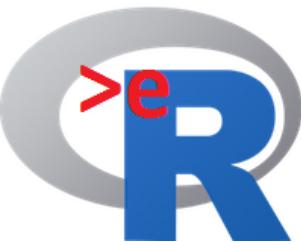
Workshop's website

<https://erbiostat.wixsite.com/itp6>



The ISDSS2025 courses' materials

- We do not print materials.
- All online:
 - Slides.
 - R programs.
 - ...



The ISDSS2025 website

<https://erbiostat.wixsite.com/itp6>

The screenshot shows a browser window displaying the ISDSS2025 website. The header includes a Wix logo and a 'Get Started' button. The main navigation menu has links for HOME, ABOUT Log In, SCHEDULE, VENUE, and CONTACT. Below the menu, there are logos for NEW-CLICK, University of Pretoria, DSI UHASSELT, vliRuOS, and a stylized 'QR' logo. A text block states: "The ISDSS workshop & conference is organized in parallel to the International Symposium on Modern Statistics and Biostatistics (SYMSTAT2025) in the University of Pretoria. For more details about SYMSTAT2025 look [here](#)." A large blue 'SCHEDULE' section is visible, with a red arrow pointing to a red link text "A link to all course materials are available [here](#)." The date "29/06" is prominently displayed. The bottom of the screen shows a Windows taskbar with various icons and a system tray.

WIX | This website was built on Wix. Create yours today. [Get Started](#)

HOME [ABOUT Log In](#) SCHEDULE VENUE CONTACT

NEW-CLICK University of Pretoria DSI UHASSELT vliRuOS QR

The ISDSS workshop & conference is organized in parallel to the International Symposium on Modern Statistics and Biostatistics (SYMSTAT2025) in the University of Pretoria. For more details about SYMSTAT2025 look [here](#).

/ SCHEDULE

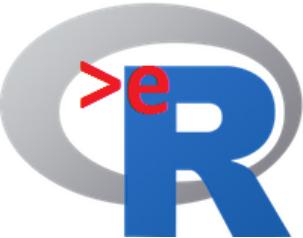
A link to all course materials are available [here](#).

29/06

Sunday

12:00-13:00: Lunch.
13:00-14:30: Ziv Shkedy + Leyla Kodalci (UHasselt, Belgium) + Samuel Manda (Pretoria University, South Africa): Introduction to the workshop + E-learning development.
14:30-15:00: Coffee break.
15:00-16:00: Ziv Shkedy + Leyla Kodalci (UHasselt, Belgium) + Samuel Manda (Pretoria University, South Africa): Introduction to the workshop + E-learning development.

LET'S CHAT!



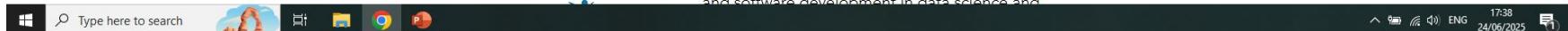
The eR-BioStat website (online materials)

A screenshot of a web browser window displaying the eR-BioStat website. The address bar shows the URL <https://erbiostat.wixsite.com/itpb0>. The page header includes the Wix logo and a message stating "This website was built on Wix. Create yours today." with a "Get Started" button. On the left, a sidebar menu lists "The eR-BioStat ITP", "Home", "Online materials", "The eR-BioStat", "About Us", and "Contact". The main content area features a green-to-orange gradient background. It displays logos for VLIR-UOS, M.O.T. University, DSI Data Science Institute, and UHASSELT. Below the logos, text reads "The VLIR-UOS INTERNATIONAL TRAINING PROGRAM: The eR-BioStat ITP: Development of local E-learning platforms in (bio)statistics." At the bottom, the years "2023-2026" are shown.

Online materials for the Workshops & Short Courses

20/02/24-23/02/24

International symposium on current trends in modeling
and software development in data science and



<https://erbiostat.wixsite.com/itpb0>



The eR-BioStat website (online materials)

WIX | This website was built on Wix. Create yours today. [Get Started](#)

The eR-BioStat ITP

Home

Online materials

The eR-BioStat

About Us

Contact

12/05/2025-15/05/2025 Strengthening Education & Research in Biostatistics and Data Science in Uganda.
IBS Uganda.

I B S

Files for Monday 12/05/25 (Samuel Manda) Files for Monday 12/05/25 (Ziv Shkedy) Files for Tuesday 13/05/25 (Ziv Shkedy)

Files for Tuesday 13/05/25 (Tarylee Reddy)

29/06/2025-05/07/2025 International symposium on current trends in modeling and software development in data science and Statistics.
Pretoria, South Africa

University of Pretoria

Files for Monday 30/06/25 Files for Tuesday 02/07/25

Files for Tuesday 01/07/25 Files for Saturday 05/07/25

Type here to search ENG 17:41 24/06/2025



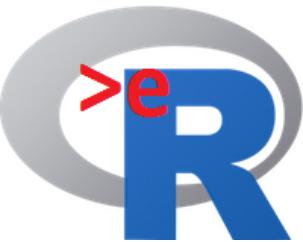
Interuniversity Institute for Biostatistics
and statistical Bioinformatics



What do you need do you need for the workshop ?

Workshop's website

<https://erbiostat.wixsite.com/itp6>



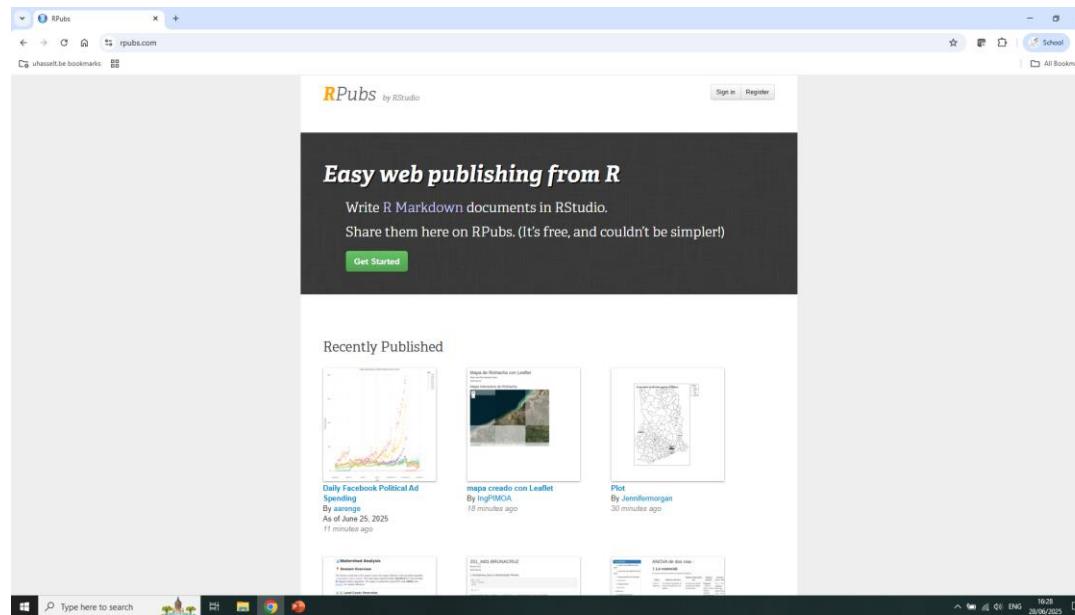
The ISDSS2025 courses' materials

- Laptop.
- R , R Studio, R markdown.
- Account in RPubs.

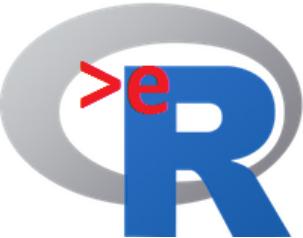


What is our target for ISDSS2025 (for E-learning development)

- Producing the output on the Laptop.
 - Using R , R Studio, R markdown.
- Upload the content online to RPubs.



<https://rpubs.com/>



Creating an online content

My account in RPubs.

RPubs by RStudio

zivshkedy Ziv Shkedy

Recently Published

Chapter 4 (Temp)
9 days ago

VOEDA1
12 days ago

Chapter 8 (Temp)
about 1 month ago

Inference for numerical data

1. Single-sample inference with the t-distribution

1.3 The t distribution

Chapter 5 (Temp)
about 1 month ago

Foundations for inference using R

1. Variability in estimates

1.2 A power estimate for the population parameter

1.3 Estimating mean speed in the accuracy dataset

Data and point estimates

Visualizing Data and Exploratory Data analysis using ggplot2 in R

1. Introduction

1.1 Data and the ggplot2 package

1.2 Visualizing data in R

1.3 Data frames and ggplot2

1.4 Facets for dimensions

Inference for categorical data

1. Inference for a single proportion

1.2 The Witchick's study

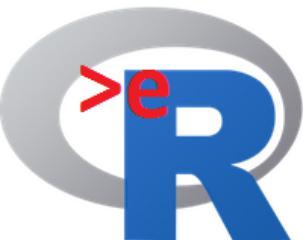
Inference for numerical data

1. Single-sample inference with the t-distribution

1.3 The t distribution

Type here to search

16:30 28/06/2025



Creating an online content

<https://rpubs.com/zivshkedy/1323673>

The screenshot shows a web browser displaying an R Markdown document. The URL in the address bar is <https://rpubs.com/zivshkedy/1323673>. The page title is "Foundations for inference using R". The content includes a sidebar with a table of contents:

1. Variability in estimates
2. Standard error of the mean
3. Confidence intervals
4. Hypothesis testing
5 Hypothesis testing and confidence intervals
6 Decision error (Type I and Type II error)

The main text area starts with section 1.1. The first section is "1. Variability in estimates". Below it is "1.2 A point estimate for the population parameter", which contains a paragraph about estimating population parameters from sample statistics. The next section is "1.3 Example: the wind speed in the airquality dataset", followed by a heading "Data and point estimates". A code block shows the first 6 lines of the airquality dataset:

```
## [1] 153 6
```

The text below the code states: "The first 6 lines of the dataset are shown below."

```
## [1] 153 6
```

At the bottom of the page, there is a toolbar with various icons and status information.

Online HTML file
with content about
inference suing R.



Creating an online content

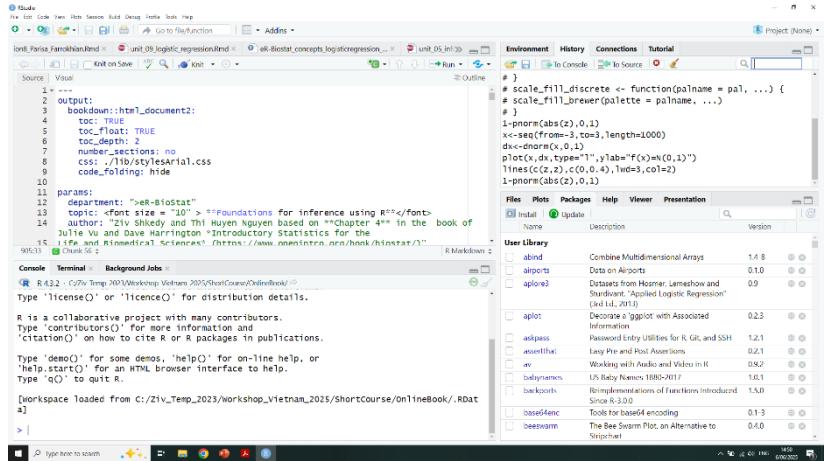
Day 1 29/06	Day 2 30/06	Day 3 01/07	Day 4 02/07	Day 5 03/07	Day 6 04/07	Day 7 05/07
Platform training	Stat & data science training	Stat & data science training	Stat & data science training	conference	conference	Platform training

+ Online meeting after the workshop



- How to create/produce the HTML file using R Markdown ?
- How to upload online ?
- How to connect to a website ? (next workshop in February 2026).

From Rmd to HTML (laptop)



```
1 # ---  
2 # output:  
3 #   bookdown::html_document2:  
4 #     toc: TRUE  
5 #     toc_float: TRUE  
6 #     toc_depth: 3  
7 #     number_sections: no  
8 #     css: ./lib/stylesArial.css  
9 #     code_folding: hide  
10 # params:  
11 #   department: ">ER-BioStat"  
12 #   topic_size: "100" # "Foundations for inference using R"  
13 #   author: "Ziv Shkedy and Thi Huyen Nguyen based on ""Chapter 4"" in the book of  
14 #     Julie Vu and Dave Harrington "Introductory Statistics for the Life and Biomedical Sciences" (http://www.openintro.org/book/biostat/)"  
15 #  
16 #  
17 #  
18 #  
19 #  
20 #  
21 #  
22 #  
23 #  
24 #  
25 #  
26 #  
27 #  
28 #  
29 #  
30 #  
31 #  
32 #  
33 #  
34 #  
35 #  
36 #  
37 #  
38 #  
39 #  
40 #  
41 #  
42 #  
43 #  
44 #  
45 #  
46 #  
47 #  
48 #  
49 #  
50 #  
51 #  
52 #  
53 #  
54 #  
55 #  
56 #  
57 #  
58 #  
59 #  
60 #  
61 #  
62 #  
63 #  
64 #  
65 #  
66 #  
67 #  
68 #  
69 #  
70 #  
71 #  
72 #  
73 #  
74 #  
75 #  
76 #  
77 #  
78 #  
79 #  
80 #  
81 #  
82 #  
83 #  
84 #  
85 #  
86 #  
87 #  
88 #  
89 #  
90 #  
91 #  
92 #  
93 #  
94 #  
95 #  
96 #  
97 #  
98 #  
99 #  
100 #  
101 #  
102 #  
103 #  
104 #  
105 #  
106 #  
107 #  
108 #  
109 #  
110 #  
111 #  
112 #  
113 #  
114 #  
115 #  
116 #  
117 #  
118 #  
119 #  
120 #  
121 #  
122 #  
123 #  
124 #  
125 #  
126 #  
127 #  
128 #  
129 #  
130 #  
131 #  
132 #  
133 #  
134 #  
135 #  
136 #  
137 #  
138 #  
139 #  
140 #  
141 #  
142 #  
143 #  
144 #  
145 #  
146 #  
147 #  
148 #  
149 #  
150 #  
151 #  
152 #  
153 #  
154 #  
155 #  
156 #  
157 #  
158 #  
159 #  
160 #  
161 #  
162 #  
163 #  
164 #  
165 #  
166 #  
167 #  
168 #  
169 #  
170 #  
171 #  
172 #  
173 #  
174 #  
175 #  
176 #  
177 #  
178 #  
179 #  
180 #  
181 #  
182 #  
183 #  
184 #  
185 #  
186 #  
187 #  
188 #  
189 #  
190 #  
191 #  
192 #  
193 #  
194 #  
195 #  
196 #  
197 #  
198 #  
199 #  
200 #  
201 #  
202 #  
203 #  
204 #  
205 #  
206 #  
207 #  
208 #  
209 #  
210 #  
211 #  
212 #  
213 #  
214 #  
215 #  
216 #  
217 #  
218 #  
219 #  
220 #  
221 #  
222 #  
223 #  
224 #  
225 #  
226 #  
227 #  
228 #  
229 #  
230 #  
231 #  
232 #  
233 #  
234 #  
235 #  
236 #  
237 #  
238 #  
239 #  
240 #  
241 #  
242 #  
243 #  
244 #  
245 #  
246 #  
247 #  
248 #  
249 #  
250 #  
251 #  
252 #  
253 #  
254 #  
255 #  
256 #  
257 #  
258 #  
259 #  
260 #  
261 #  
262 #  
263 #  
264 #  
265 #  
266 #  
267 #  
268 #  
269 #  
270 #  
271 #  
272 #  
273 #  
274 #  
275 #  
276 #  
277 #  
278 #  
279 #  
280 #  
281 #  
282 #  
283 #  
284 #  
285 #  
286 #  
287 #  
288 #  
289 #  
290 #  
291 #  
292 #  
293 #  
294 #  
295 #  
296 #  
297 #  
298 #  
299 #  
300 #  
301 #  
302 #  
303 #  
304 #  
305 #  
306 #  
307 #  
308 #  
309 #  
310 #  
311 #  
312 #  
313 #  
314 #  
315 #  
316 #  
317 #  
318 #  
319 #  
320 #  
321 #  
322 #  
323 #  
324 #  
325 #  
326 #  
327 #  
328 #  
329 #  
330 #  
331 #  
332 #  
333 #  
334 #  
335 #  
336 #  
337 #  
338 #  
339 #  
340 #  
341 #  
342 #  
343 #  
344 #  
345 #  
346 #  
347 #  
348 #  
349 #  
350 #  
351 #  
352 #  
353 #  
354 #  
355 #  
356 #  
357 #  
358 #  
359 #  
360 #  
361 #  
362 #  
363 #  
364 #  
365 #  
366 #  
367 #  
368 #  
369 #  
370 #  
371 #  
372 #  
373 #  
374 #  
375 #  
376 #  
377 #  
378 #  
379 #  
380 #  
381 #  
382 #  
383 #  
384 #  
385 #  
386 #  
387 #  
388 #  
389 #  
390 #  
391 #  
392 #  
393 #  
394 #  
395 #  
396 #  
397 #  
398 #  
399 #  
400 #  
401 #  
402 #  
403 #  
404 #  
405 #  
406 #  
407 #  
408 #  
409 #  
410 #  
411 #  
412 #  
413 #  
414 #  
415 #  
416 #  
417 #  
418 #  
419 #  
420 #  
421 #  
422 #  
423 #  
424 #  
425 #  
426 #  
427 #  
428 #  
429 #  
430 #  
431 #  
432 #  
433 #  
434 #  
435 #  
436 #  
437 #  
438 #  
439 #  
440 #  
441 #  
442 #  
443 #  
444 #  
445 #  
446 #  
447 #  
448 #  
449 #  
450 #  
451 #  
452 #  
453 #  
454 #  
455 #  
456 #  
457 #  
458 #  
459 #  
460 #  
461 #  
462 #  
463 #  
464 #  
465 #  
466 #  
467 #  
468 #  
469 #  
470 #  
471 #  
472 #  
473 #  
474 #  
475 #  
476 #  
477 #  
478 #  
479 #  
480 #  
481 #  
482 #  
483 #  
484 #  
485 #  
486 #  
487 #  
488 #  
489 #  
490 #  
491 #  
492 #  
493 #  
494 #  
495 #  
496 #  
497 #  
498 #  
499 #  
500 #  
501 #  
502 #  
503 #  
504 #  
505 #  
506 #  
507 #  
508 #  
509 #  
510 #  
511 #  
512 #  
513 #  
514 #  
515 #  
516 #  
517 #  
518 #  
519 #  
520 #  
521 #  
522 #  
523 #  
524 #  
525 #  
526 #  
527 #  
528 #  
529 #  
530 #  
531 #  
532 #  
533 #  
534 #  
535 #  
536 #  
537 #  
538 #  
539 #  
540 #  
541 #  
542 #  
543 #  
544 #  
545 #  
546 #  
547 #  
548 #  
549 #  
550 #  
551 #  
552 #  
553 #  
554 #  
555 #  
556 #  
557 #  
558 #  
559 #  
560 #  
561 #  
562 #  
563 #  
564 #  
565 #  
566 #  
567 #  
568 #  
569 #  
570 #  
571 #  
572 #  
573 #  
574 #  
575 #  
576 #  
577 #  
578 #  
579 #  
580 #  
581 #  
582 #  
583 #  
584 #  
585 #  
586 #  
587 #  
588 #  
589 #  
590 #  
591 #  
592 #  
593 #  
594 #  
595 #  
596 #  
597 #  
598 #  
599 #  
600 #  
601 #  
602 #  
603 #  
604 #  
605 #  
606 #  
607 #  
608 #  
609 #  
610 #  
611 #  
612 #  
613 #  
614 #  
615 #  
616 #  
617 #  
618 #  
619 #  
620 #  
621 #  
622 #  
623 #  
624 #  
625 #  
626 #  
627 #  
628 #  
629 #  
630 #  
631 #  
632 #  
633 #  
634 #  
635 #  
636 #  
637 #  
638 #  
639 #  
640 #  
641 #  
642 #  
643 #  
644 #  
645 #  
646 #  
647 #  
648 #  
649 #  
650 #  
651 #  
652 #  
653 #  
654 #  
655 #  
656 #  
657 #  
658 #  
659 #  
660 #  
661 #  
662 #  
663 #  
664 #  
665 #  
666 #  
667 #  
668 #  
669 #  
670 #  
671 #  
672 #  
673 #  
674 #  
675 #  
676 #  
677 #  
678 #  
679 #  
680 #  
681 #  
682 #  
683 #  
684 #  
685 #  
686 #  
687 #  
688 #  
689 #  
690 #  
691 #  
692 #  
693 #  
694 #  
695 #  
696 #  
697 #  
698 #  
699 #  
700 #  
701 #  
702 #  
703 #  
704 #  
705 #  
706 #  
707 #  
708 #  
709 #  
710 #  
711 #  
712 #  
713 #  
714 #  
715 #  
716 #  
717 #  
718 #  
719 #  
720 #  
721 #  
722 #  
723 #  
724 #  
725 #  
726 #  
727 #  
728 #  
729 #  
730 #  
731 #  
732 #  
733 #  
734 #  
735 #  
736 #  
737 #  
738 #  
739 #  
740 #  
741 #  
742 #  
743 #  
744 #  
745 #  
746 #  
747 #  
748 #  
749 #  
750 #  
751 #  
752 #  
753 #  
754 #  
755 #  
756 #  
757 #  
758 #  
759 #  
760 #  
761 #  
762 #  
763 #  
764 #  
765 #  
766 #  
767 #  
768 #  
769 #  
770 #  
771 #  
772 #  
773 #  
774 #  
775 #  
776 #  
777 #  
778 #  
779 #  
780 #  
781 #  
782 #  
783 #  
784 #  
785 #  
786 #  
787 #  
788 #  
789 #  
790 #  
791 #  
792 #  
793 #  
794 #  
795 #  
796 #  
797 #  
798 #  
799 #  
800 #  
801 #  
802 #  
803 #  
804 #  
805 #  
806 #  
807 #  
808 #  
809 #  
810 #  
811 #  
812 #  
813 #  
814 #  
815 #  
816 #  
817 #  
818 #  
819 #  
820 #  
821 #  
822 #  
823 #  
824 #  
825 #  
826 #  
827 #  
828 #  
829 #  
830 #  
831 #  
832 #  
833 #  
834 #  
835 #  
836 #  
837 #  
838 #  
839 #  
840 #  
841 #  
842 #  
843 #  
844 #  
845 #  
846 #  
847 #  
848 #  
849 #  
850 #  
851 #  
852 #  
853 #  
854 #  
855 #  
856 #  
857 #  
858 #  
859 #  
860 #  
861 #  
862 #  
863 #  
864 #  
865 #  
866 #  
867 #  
868 #  
869 #  
870 #  
871 #  
872 #  
873 #  
874 #  
875 #  
876 #  
877 #  
878 #  
879 #  
880 #  
881 #  
882 #  
883 #  
884 #  
885 #  
886 #  
887 #  
888 #  
889 #  
890 #  
891 #  
892 #  
893 #  
894 #  
895 #  
896 #  
897 #  
898 #  
899 #  
900 #  
901 #  
902 #  
903 #  
904 #  
905 #  
906 #  
907 #  
908 #  
909 #  
910 #  
911 #  
912 #  
913 #  
914 #  
915 #  
916 #  
917 #  
918 #  
919 #  
920 #  
921 #  
922 #  
923 #  
924 #  
925 #  
926 #  
927 #  
928 #  
929 #  
930 #  
931 #  
932 #  
933 #  
934 #  
935 #  
936 #  
937 #  
938 #  
939 #  
940 #  
941 #  
942 #  
943 #  
944 #  
945 #  
946 #  
947 #  
948 #  
949 #  
950 #  
951 #  
952 #  
953 #  
954 #  
955 #  
956 #  
957 #  
958 #  
959 #  
960 #  
961 #  
962 #  
963 #  
964 #  
965 #  
966 #  
967 #  
968 #  
969 #  
970 #  
971 #  
972 #  
973 #  
974 #  
975 #  
976 #  
977 #  
978 #  
979 #  
980 #  
981 #  
982 #  
983 #  
984 #  
985 #  
986 #  
987 #  
988 #  
989 #  
990 #  
991 #  
992 #  
993 #  
994 #  
995 #  
996 #  
997 #  
998 #  
999 #  
1000 #  
1001 #  
1002 #  
1003 #  
1004 #  
1005 #  
1006 #  
1007 #  
1008 #  
1009 #  
1010 #  
1011 #  
1012 #  
1013 #  
1014 #  
1015 #  
1016 #  
1017 #  
1018 #  
1019 #  
1020 #  
1021 #  
1022 #  
1023 #  
1024 #  
1025 #  
1026 #  
1027 #  
1028 #  
1029 #  
1030 #  
1031 #  
1032 #  
1033 #  
1034 #  
1035 #  
1036 #  
1037 #  
1038 #  
1039 #  
1040 #  
1041 #  
1042 #  
1043 #  
1044 #  
1045 #  
1046 #  
1047 #  
1048 #  
1049 #  
1050 #  
1051 #  
1052 #  
1053 #  
1054 #  
1055 #  
1056 #  
1057 #  
1058 #  
1059 #  
1060 #  
1061 #  
1062 #  
1063 #  
1064 #  
1065 #  
1066 #  
1067 #  
1068 #  
1069 #  
1070 #  
1071 #  
1072 #  
1073 #  
1074 #  
1075 #  
1076 #  
1077 #  
1078 #  
1079 #  
1080 #  
1081 #  
1082 #  
1083 #  
1084 #  
1085 #  
1086 #  
1087 #  
1088 #  
1089 #  
1090 #  
1091 #  
1092 #  
1093 #  
1094 #  
1095 #  
1096 #  
1097 #  
1098 #  
1099 #  
1100 #  
1101 #  
1102 #  
1103 #  
1104 #  
1105 #  
1106 #  
1107 #  
1108 #  
1109 #  
1110 #  
1111 #  
1112 #  
1113 #  
1114 #  
1115 #  
1116 #  
1117 #  
1118 #  
1119 #  
1120 #  
1121 #  
1122 #  
1123 #  
1124 #  
1125 #  
1126 #  
1127 #  
1128 #  
1129 #  
1130 #  
1131 #  
1132 #  
1133 #  
1134 #  
1135 #  
1136 #  
1137 #  
1138 #  
1139 #  
1140 #  
1141 #  
1142 #  
1143 #  
1144 #  
1145 #  
1146 #  
1147 #  
1148 #  
1149 #  
1150 #  
1151 #  
1152 #  
1153 #  
1154 #  
1155 #  
1156 #  
1157 #  
1158 #  
1159 #  
1160 #  
1161 #  
1162 #  
1163 #  
1164 #  
1165 #  
1166 #  
1167 #  
1168 #  
1169 #  
1170 #  
1171 #  
1172 #  
1173 #  
1174 #  
1175 #  
1176 #  
1177 #  
1178 #  
1179 #  
1180 #  
1181 #  
1182 #  
1183 #  
1184 #  
1185 #  
1186 #  
1187 #  
1188 #  
1189 #  
1190 #  
1191 #  
1192 #  
1193 #  
1194 #  
1195 #  
1196 #  
1197 #  
1198 #  
1199 #  
1200 #  
1201 #  
1202 #  
1203 #  
1204 #  
1205 #  
1206 #  
1207 #  
1208 #  
1209 #  
1210 #  
1211 #  
1212 #  
1213 #  
1214 #  
1215 #  
1216 #  
1217 #  
1218 #  
1219 #  
1220 #  
1221 #  
1222 #  
1223 #  
1224 #  
1225 #  
1226 #  
1227 #  
1228 #  
1229 #  
1230 #  
1231 #  
1232 #  
1233 #  
1234 #  
1235 #  
1236 #  
1237 #  
1238 #  
1239 #  
1240 #  
1241 #  
1242 #  
1243 #  
1244 #  
1245 #  
1246 #  
1247 #  
1248 #  
1249 #  
1250 #  
1251 #  
1252 #  
1253 #  
1254 #  
1255 #  
1256 #  
1257 #  
1258 #  
1259 #  
1260 #  
1261 #  
1262 #  
1263 #  
1264 #  
1265 #  
1266 #  
1267 #  
1268 #  
1269 #  
1270 #  
1271 #  
1272 #  
1273 #  
1274 #  
1275 #  
1276 #  
1277 #  
1278 #  
1279 #  
1280 #  
1281 #  
1282 #  
1283 #  
1284 #  
1285 #  
1286 #  
1287 #  
1288 #  
1289 #  
1290 #  
1291 #  
1292 #  
1293 #  
1294 #  
1295 #  
1296 #  
1297 #  
1298 #  
1299 #  
1300 #  
1301 #  
1302 #  
1303 #  
1304 #  
1305 #  
1306 #  
1307 #  
1308 #  
1309 #  
1310 #  
1311 #  
1312 #  
1313 #  
1314 #  
1315 #  
1316 #  
1317 #  
1318 #  
1319 #  
1320 #  
1321 #  
1322 #  
1323 #  
1324 #  
1325 #  
1326 #  
1327 #  
1328 #  
1329 #  
1330 #  
1331 #  
1332 #  
1333 #  
1334 #  
1335 #  
1336 #  
1337 #  
1338 #  
1339 #  
1340 #  
1341 #  
1342 #  
1343 #  
1344 #  
1345 #  
1346 #  
1347 #  
1348 #  
1349 #  
1350 #  
1351 #  
1352 #  
1353 #  
1354 #  
1355 #  
1356 #  
1357 #  
1358 #  
1359 #  
1360 #  
1361 #  
1362 #  
1363 #  
1364 #  
1365 #  
1366 #  
1367 #  
1368 #  
1369 #  
1370 #  
1371 #  
1372 #  
1373 #  
1374 #  
1375 #  
1376 #  
1377 #  
1378 #  
1379 #  
1380 #  
1381 #  
1382 #  
1383 #  
1384 #  
1385 #  
1386 #  
1387 #  
1388 #  
1389 #  
1390 #  
1391 #  
1392 #  
1393 #  
1394 #  
1395 #  
1396 #  
1397 #  
1398 #  
1399 #  
1400 #  
1401 #  
1402 #  
1403 #  
1404 #  
1405 #  
1406 #  
1407 #  
1408 #  
1409 #  
1410 #  
1411 #  
1412 #  
1413 #  
1414 #  
1415 #  
1416 #  
1417 #  
1418 #  
1419 #  
1420 #  
1421 #  
1422 #  
1423 #  
1424 #  
1425 #  
1426 #  
1427 #  
1428 #  
1429 #  
1430 #  
1431 #  
1432 #  
1433 #  
1434 #  
1435 #  
1436 #  
1437 #  
1438 #  
1439 #  
1440 #  
1441 #  
1442 #  
1443 #  
1444 #  
1445 #  
1446 #  
1447 #  
1448 #  
1449 #  
1450 #  
1451 #  
1452 #  
1453 #  
1454 #  
1455 #  
1456 #  
1457 #  
1458 #  
1459 #  
1460 #  
1461 #  
1462 #  
1463 #  
1464 #  
1465 #  
1466 #  
1467 #  
1468 #  
1469 #  
1470 #  
1471 #  
1472 #  
1473 #  
1474 #  
1475 #  
1476 #  
1477 #  
1478 #  
1479 #  
1480 #  
1481 #  
1482 #  
1483 #  
1484 #  
1485 #  
1486 #  
1487 #  
1488 #  
1489 #  
1490 #  
1491 #  
1492 #  
1493 #  
1494 #  
1495 #  
1496 #  
1497 #  
1498 #  
1499 #  
1500 #  
1501 #  
1502 #  
1503 #  
1504 #  
1505 #  
1506 #  
1507 #  
1508 #  
1509 #  
1510 #  
1511 #  
1512 #  
1513 #  
1514 #  
1515 #  
1516 #  
1517 #  
1518 #  
1519 #  
1520 #  
1521 #  
1522 #  
1523 #  
1524 #  
1525 #  
1526 #  
1527 #  
1528 #  
1529 #  
1530 #  
1531 #  
1532 #  
1533 #  
1534 #  
1535 #  
1536 #  
1537 #  
1538 #  
1539 #  
1540 #  
1541 #  
1542 #  
1543 #  
1544 #  
1545 #  
1546 #  
1547 #  
1548 #  
1549 #  
1550 #  
1551 #  
1552 #  
1553 #  
1554 #  
1555 #  
1556 #  
1557 #  
1558 #  
1559 #  
1560 #  
1561 #  
1562 #  
1563 #  
1564 #  
1565 #  
1566 #  
1567 #  
1568 #  
1569 #  
1570 #  
1571 #  
1572 #  
1573 #  
1574 #  
1575 #  
1576 #  
1577 #  
1578 #  
1579 #  
1580 #  
1581 #  
1582 #  
1583 #  
1584 #  
1585 #  
1586 #  
1587 #  
1588 #  
1589 #  
1590 #  
1591 #  
1592 #  
1593 #  
1594 #  
1595 #  
1596 #  
1597 #  
1598 #  
1599 #  
1600 #  
1601 #  
1602 #  
1603 #  
1604 #  
1605 #  
1606 #  
1607 #  
1608 #  
1609 #  
1610 #  
1611 #  
1612 #  
1613 #  
1614 #  
1615 #  
1616 #  
1617 #  
1618 #  
1619 #  
1620 #  
1621 #  
1622 #  
1623 #  
1624 #  
1625 #  
1626 #  
1627 #  
1628 #  
1629 #  
1630 #  
1631 #  
1632 #  
16
```

Offline to Online

The screenshot shows an RStudio interface. On the left is the code editor with an R script titled 'Foundations for inference using R'. The script includes sections like 'Variability in estimates', 'A point estimate for the population parameter', and 'Example: the wind speed in the airquality dataset'. On the right is the R console window showing the output of the script.

- Laptop.

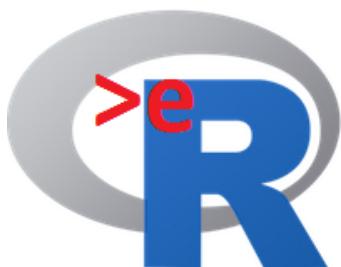


This step: 05/07.

- RPubs.
- Online (HTML).
 - Everybody can see and use.

The screenshot shows the RPubs website with the same document titled 'Foundations for inference using R'. The content is identical to the RStudio version, including the sections and the airquality dataset example. The RPubs logo is visible on the left.

<https://rpubs.com/zivshkedy/1323673>



Interuniversity Institute for Biostatistics
and statistical Bioinformatics



Thank you very much !!

Join our community and look for us online:



Visit us on
Facebook

ER-BioStat

<https://erbiostat.wixsite.com/erbiostat>

GitHub <https://github.com/eR-Biostat>

@erbiostat



The ISDSS2025 structure