

R radionica: Uvod u R programiranje

Startit, Beograd

19.2.2019

O meni

Master Metodologije istraživanja, Univerzitet u Nojšatelju (major)



Master Data Science, Univerzitet u Cirihi (minor)



Master in Statistics



ESRA (European Survey Research Association)

RLadies Belgrade, RLadies Lausanne,

R-Ladies Belgrade



Lausanne, Switzerland



Sadržaj

1. **Uvod u R programski jezik**
2. **Šta sve R može?**
3. **Kako R može da pomogne pri statističkoj analizi podataka?**
4. **Manipulacija i vizuelizacija podataka u R-u**
5. **Kako nastaviti učenje (samostalno)?**
6. **RLadies i ostali R igrači na srpskoj sceni**

Uvod u R programski jezik

R kao programski jezik (1993.)

Preteča R-a je programski jezik S (Bell Laboratories)

Prvenstveno je bio namenjen statističarima

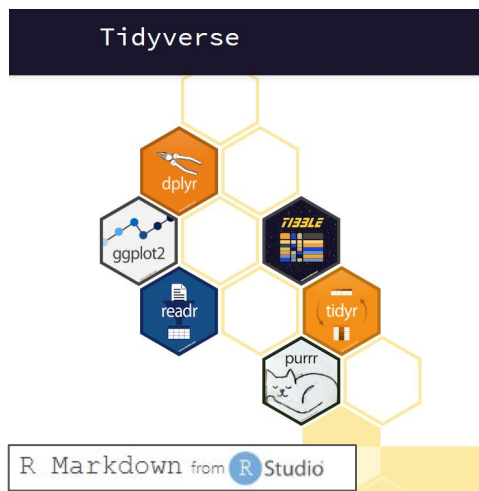
Danas je u širokoj upotrebi (analitičari tržišta, programeri, biolozi, hemičari, lingvisti, sociolozi, psiholozi...)

Popularan jer je: open-source/jednostavan za upotrebu/ima ogroman community/fleksibilan/ima veliki izbor paketa

Uvod u R programski jezik

Base R i paketi (*packages*) kao dodaci

Među najpopularnijima su:



Machine Learning packages:
**E1071, randomForest,
RWeka, glmnet, lars etc.**

Package ‘tidyverse’
November 14, 2017

Title Easily Install and Load the ‘Tidyverse’
Version 1.2.1

Description The ‘tidyverse’ is a set of packages that work in harmony because they share common data representations and ‘API’ design. This package is designed to make it easy to install and load multiple ‘tidyverse’ packages in a single step. Learn more about the ‘tidyverse’ at <<https://tidyverse.org>>.

License GPL-3|file LICENSE

URL <http://tidyverse.tidyverse.org>.
<https://github.com/tidyverse/tidyverse>

BugReports <https://github.com/tidyverse/tidyverse/issues>

Imports beacon (>= 0.4.2), cli (>= 1.0.0), crayon (>= 1.3.4), dplyr (>= 0.7.4), dplyr (>= 1.1.0), forcats (>= 0.2.0), ggplot2 (>= 2.2.1), haven (>= 1.1.0), hms (>= 0.3), httr (>= 1.3.1), jsonlite (>= 1.5), lubridate (>= 1.7.1), magrittr (>= 1.5), modelr (>= 0.1.1), purrr (>= 0.2.4), readr (>= 1.1.1), readxl (>= 1.0.0), rstan (>= 0.1.1), rlang (>= 0.1.4), rmarkdown (>= 0.7), rvest (>= 0.3.2), stringr (>= 1.2.0), tibble (>= 1.3.4), tidyr (>= 0.7.2), xml2 (>= 1.1.1)

Suggests feather (>= 0.3.1), knitr (>= 1.17), rmarkdown (>= 1.7.4)

VignetteBuilder knitr

Encoding UTF-8

LazyData true

RoxysenNote 6.0.1

NeedsCompilation no

Author Hadley Wickham [aut, cre],
RStudio [cph, fnd]

Maintainer Hadley Wickham <hadley@rstudio.com>

Repository CRAN

Pronađite pakete koji će vama biti korisni!

Uvod u R programski jezik

R vs R Studio



Šta sve R može?



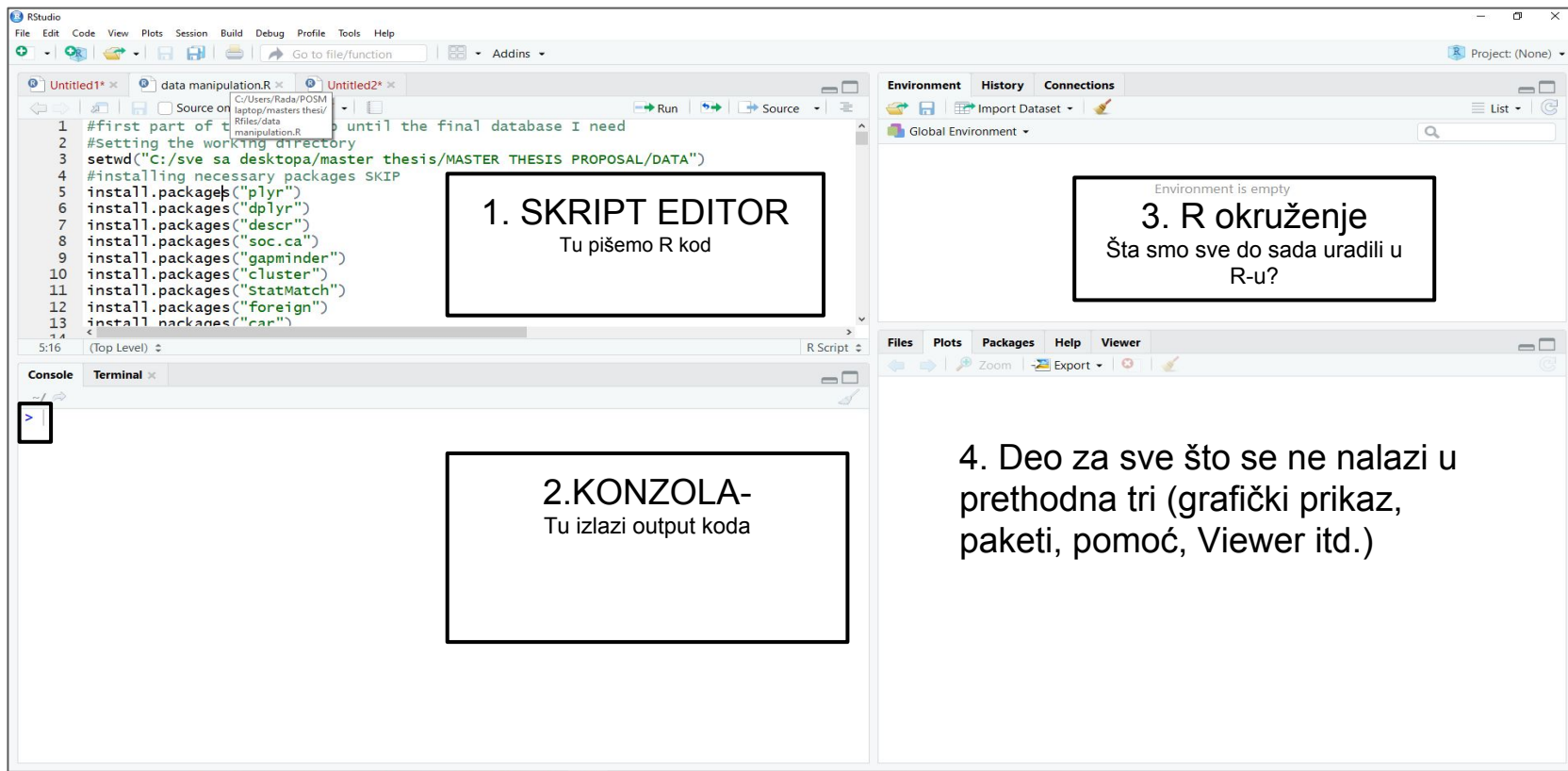
And many more...

Da li ste svi instalirali R i RStudio?

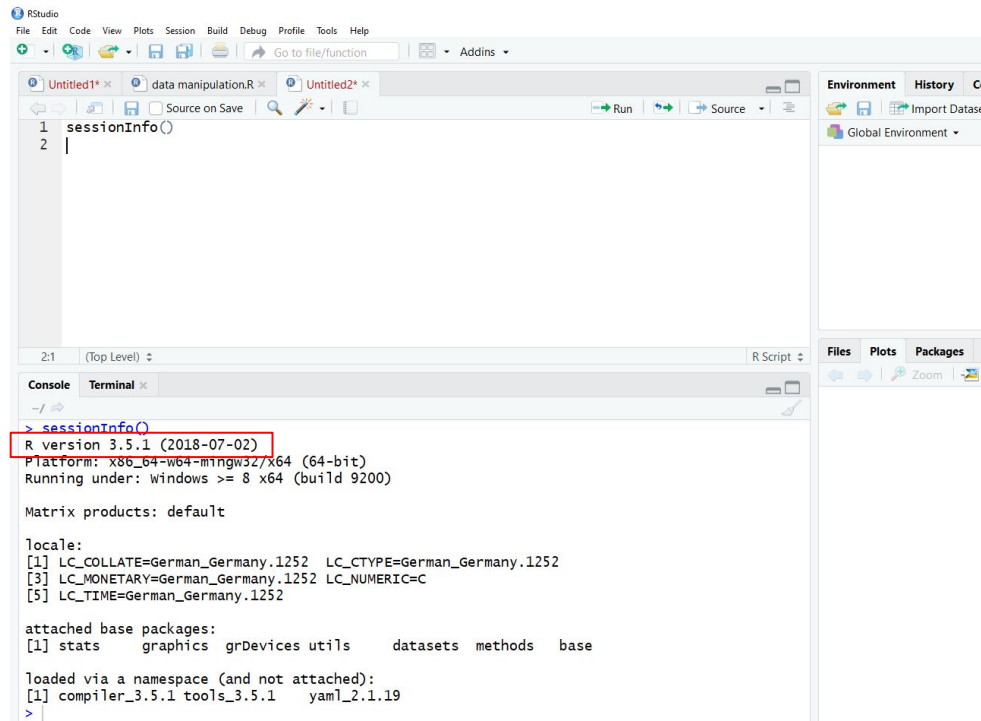
<https://cran.r-project.org/>

<https://www.rstudio.com/products/rstudio/download/>

Kako izgleda R Studio?



Koja je verzija R-a?



The screenshot shows the RStudio environment. The source editor at the top contains the following code:

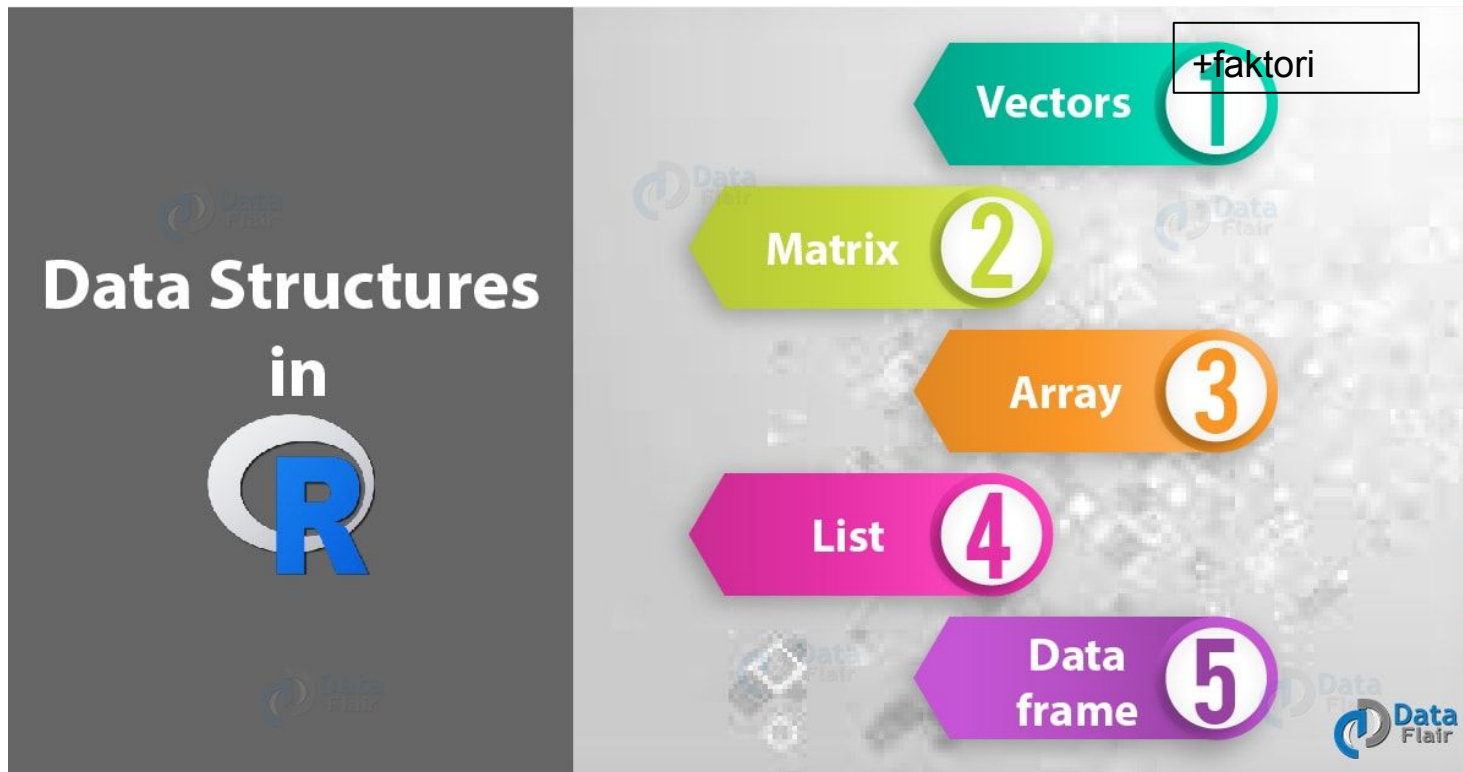
```
1 sessionInfo()  
2 |
```

The console at the bottom displays the output of the `sessionInfo()` function. The first line, `R version 3.5.1 (2018-07-02)`, is highlighted with a red box. The rest of the output is as follows:

```
> sessionInfo()  
R version 3.5.1 (2018-07-02)  
Platform: x86_64-w64-mingw32/x64 (64-bit)  
Running under: windows >= 8 x64 (build 9200)  
  
Matrix products: default  
  
locale:  
[1] LC_COLLATE=German_Germany.1252 LC_CTYPE=German_Germany.1252  
[3] LC_MONETARY=German_Germany.1252 LC_NUMERIC=C  
[5] LC_TIME=German_Germany.1252  
  
attached base packages:  
[1] stats    graphics grDevices utils    datasets methods  base  
  
loaded via a namespace (and not attached):  
[1] compiler_3.5.1 tools_3.5.1  yaml_2.1.19  
>
```

major.minor.patch

Strukture i tipovi podataka



R i statistička analiza podataka

I ostali materijal u R skripti na githubu: <https://github.com/Radmila-R-lady>

Manipulacija i vizuelizacija podataka

Manipulacija podacima.

Selektovanje podataka po različitim kriterijumima

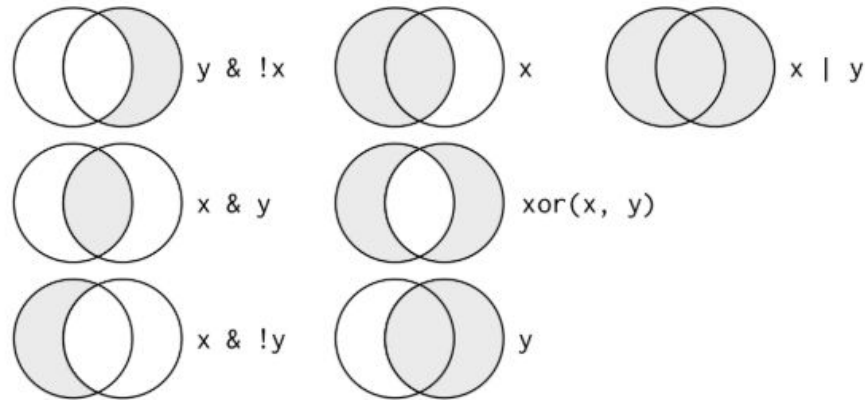


Figure 5.1: Complete set of boolean operations. x is the left-hand circle, y is the right-hand circle, and the shaded region show which parts each operator selects.

Kako nastaviti učenje (samostalno)?

Korisni linkovi

Mike Marin youtube videos

<https://www.youtube.com/watch?v=riONFzJdXcs&list=PLqzoL9-eJTnBDdKgJgJzaQcY6OXmsXAHU>

Quick-R: <https://www.statmethods.net/r-tutorial/index.html>

<https://www.rstudio.com>

Stackoverflow:

<https://stackoverflow.com/questions/1744861/how-to-learn-r-as-a-programming-language>

R Bloggers

<https://www.r-bloggers.com/the-5-most-effective-ways-to-learn-r/>

Medium: <https://blog.exploratory.io/filter-data-with-dplyr-76cf5f1a258e>

ili jednostavno ukucajte R programming

R na društvenim mrežama

Twitter: <https://twitter.com/dataandme> (Mara Averick)

<https://twitter.com/hadleywickham> (Hadley Wickam)

<https://twitter.com/RLadiesBelgrade> (RLadies Belgrade)

Tweets Tweets & replies Media

Pinned Tweet



Hadley Wickham @hadleywickham · Aug 17

Function factories chapter of adv-R is now complete: adv-r.hadley.nz/function-facto.... Learn how to make functions that make functions 🏠 (and why you might care with new ggplot2 examples) #rstats

Advanced R



Hadley Wickham

Advanced R

The book is designed primarily for R users who want to improve their programming skills and understanding of the language. It should also be useful for programmers ...

adv-r.hadley.nz



R-Ladies Belgrade @RLadiesBelgrade · Sep 16

Our @Tatjana_Kec holding an intro data science workshop for high school students @startitrs 🙌

It looks like we gathered a lot of future R ladies together 🥰

Check out the programme: klikr.rbind.io



satRdays

@satRdays_org

Following

For all R-Ladies who want to be part of SatRday Belgrade there's a special promo code "I_AM_R_LADY" that gives 20% discount. bit.ly/2M0ELdp @RLadiesBelgrade @RLadiesRemote @RLadiesGlobal

9:30 AM - 5 Sep 2018

Kako nastaviti učenje (samostalno)?

Korisna literatura

Michael Crawley: The R book

<ftp.tuebingen.mpg.de/pub/kyb/bresciani/Crawley%20-%20The%20R%20Book.pdf>

Paul Teetor, R Cookbook

http://www.bagualu.net/wordpress/wp-content/uploads/2015/10/R_Cookbook.pdf

Hadley Wickam: R for Data Science


<http://r4ds.had.co.nz/>

Robert I. Kabacoff: R in Action

<https://www.manning.com/books/r-in-action>

R Ladies i ostali R igrači na srpskoj sceni





R-Ladies Belgrade
RLadiesBelgrade

Follow

Block or report user

R-Ladies aims to increase gender diversity in #rstats community via local meetups & mentorship!

📍 Belgrade
🌐 <http://rladies.org>

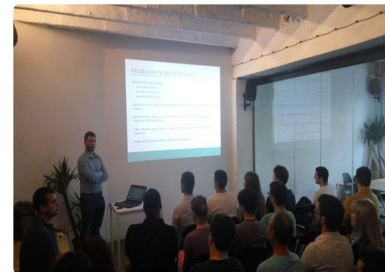
Overview Repositories 7 Projects 0 Stars 11

Popular repositories

XmasCard
Forked from [TanjaKec/XmasCard](#)
create Xmas card using #rstats: ggplot and magick
● HTML

DataWrangling
Forked from [TanjaKec/DataWrangling](#)
a brief introduction to the tools for data manipulation and visualisation: dplyr and ggplot2
● HTML

Saobracajke
Forked from [TanjaKec/Saobracajke](#)
OpenData
● R



BelgradeR

📍 Belgrade, Serbia
👤 790 members · Public group
👤 Organized by Branko Kovač and 3 others

Share: [f](#) [t](#) [in](#) [➦](#)

<https://twitter.com/RLadiesBelgrade>

Events:

20
FEB

Wednesday, February 20, 2019

Regresiona analiza, GPS podaci i planovi za dalje



Hosted by [Tatjana Keoojevic Derbyshire](#) and 2 others

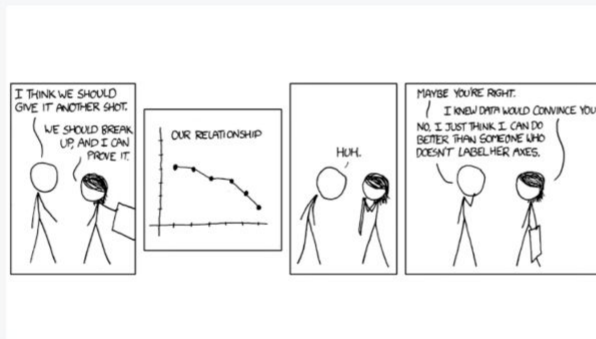
From [R-Ladies Belgrade](#)

Public group

You're going 13 people going



Share: [f](#) [t](#) [in](#) [↗](#)



Details

Drage R žene,

Nakon male zimske pauze i hibernacije, vraćamo se u akciju.

Ove nedelje će nam Radmila pričati o višestrukoj regresionoj analizi, a Katarina pokazati kako da vizualizujete GPS podatke i koristite API sa Google Maps platforme. Dodatno, imamo nekoliko vesti za naredni period!

Organizer tools ▾

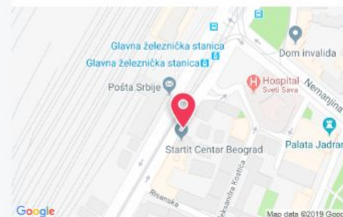
🕒 Wednesday, February 20, 2019

6:00 PM to 8:00 PM

[Add to calendar](#)

📍 Startit Centar

Savska 5, Beograd 11000 - Belgrade



Pitanja i odgovori

