

# R and R Studio

2019

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# R & RStudio

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

**<https://www.r-project.org/>**

**License: GNU General Public License**

**Pricing: Free**

**<https://www.rstudio.com/>**

**License: AGPL v3**

**Pricing : Free**

# R training Roadmap

## **1 day (1 hour) [file: R\_training\_A1.R]**

- Install R & Rstudio;
- Overview;
- First steps with Rstudio:
  - × Data types;
  - × Vectors;
  - × Plots.

# R training Roadmap

**Before start please click on “Clone or Download” green button in [https://github.com/antonelloalis/R\\_training](https://github.com/antonelloalis/R_training);  
Save and unzip the content on your computer.**

## Yes

- data handling and storage: numeric, textual
- matrix algebra
- hash tables and regular expressions
- high-level data analytic and statistical functions
- graphics
- programming language: loops, branching, subroutines

## No

- is not a database, but connects to DBMSs
- no professional / commercial support

```
ch3o@black: ~ ch3o@black: ~
ch3o@black:~$ R

R version 3.2.3 (2015-12-10) -- "Wooden Christmas-Tree"
Copyright (C) 2015 The R Foundation for Statistical Computing
Platform: x86_64-pc-linux-gnu (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.

  Natural language support but running in an English locale

R is a collaborative project with many contributors.
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'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Previously saved workspace restored]

>
```

Activities Places RStudio Thu Jan 21, 10:51:46

~/WIP/R\_project/Ethiopia/Ethiopia - RStudio

File Edit Code View Plots Session Build Debug Tools Help

Go to file/function

Hansen.R x Import\_clean.R x Hansen x

Source on Save Run Source

```
1 library(ggplot2)~
2 ~
3 ~
4 #Import data~
5 rm(list=ls())
6 # Restart the plot device~
7 dev.off()~
8 ~
9 setwd("~/home/ch3o/WIP/R_project/Ethiopia/")~
10 Hansen <- read.csv("Hansen2.csv", header = T)~
11 ~
12 plot(Hectars-Year, data = Hansen)~
13 correlation<- lm(Hectars-Year, Hansen)~
14 summary(correlation)~
15 Anova_Hansen <- aov(Hectars-Year, data = Hansen)~
16 summary(Anova_Hansen)~
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5.14 (Top Level) R Script

Console ~/WIP/R\_project/Ethiopia/Ethiopia/

type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

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Type 'demo()' for some demos, 'help()' for on-line help, or  
'help.start()' for an HTML browser interface to help.  
Type 'q()' to quit R.

[Workspace loaded from ~/WIP/R\_project/Ethiopia/Ethiopia/.RData]

> |

Environment History Git

Global Environment

Name	Type	Length	Size	Value
Anova_Hansen	aov	12	14.4 KB	List of 12
correlation	lm	12	14.4 KB	List of 12
Hansen	data.fra...	2	840 B	7 obs. of 2 variabl...

Files Plots Packages Help Viewer

R: Textual annotations. Find in Topic

### Description

geom\_text adds text directly to the plot. geom\_label draws a rectangle underneath the text, making it easier to read.

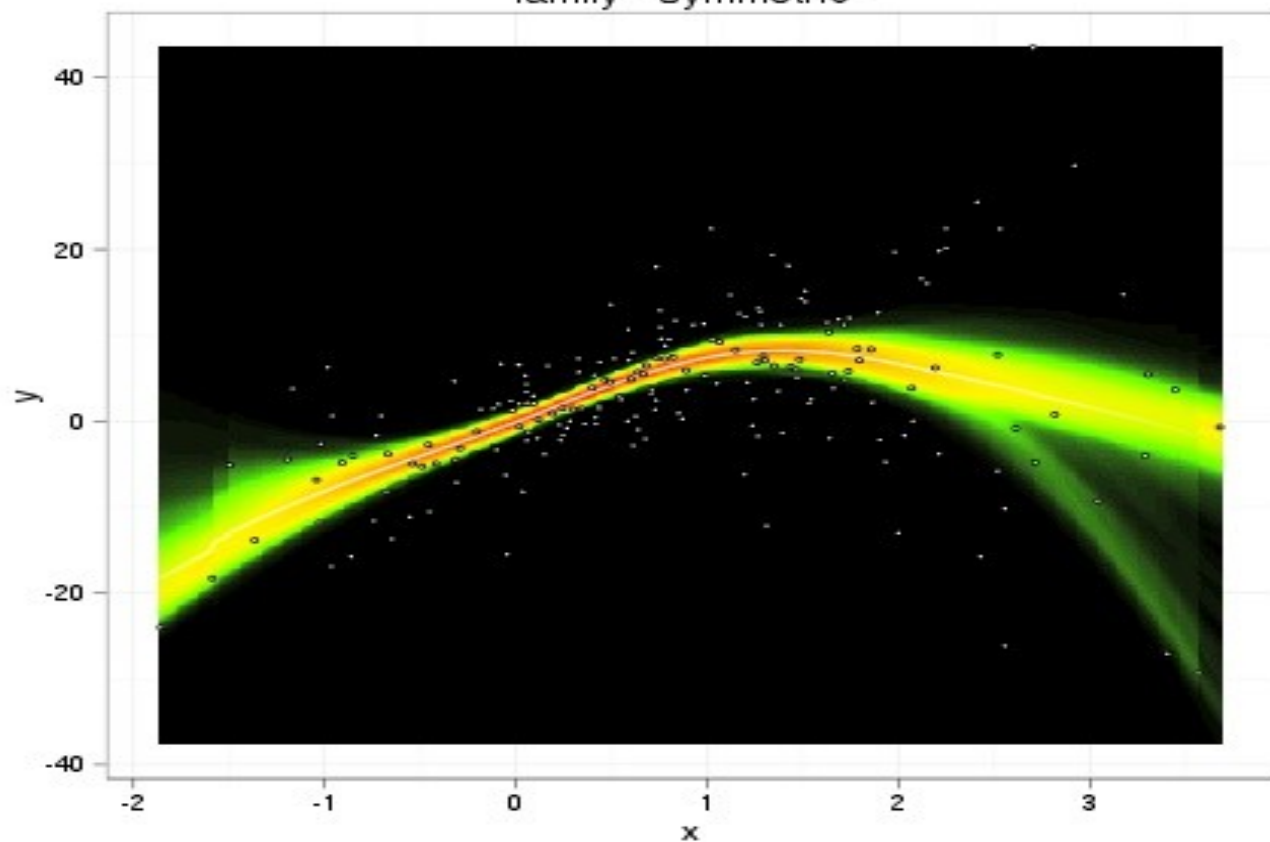
### Usage

```
geom_label(mapping = NULL, data = NULL, stat = "identity",  
position = "identity", parse = FALSE, ..., nudge_x = 0, nudge_y = 0,  
label.padding = unit(0.25, "lines"), label.r = unit(0.15, "line"),  
label.size = 0.25, na.rm = FALSE, show.legend = NA,  
inherit.aes = TRUE)
```

```
geom_text(mapping = NULL, data = NULL, stat = "identity",  
position = "identity", parse = FALSE, ..., nudge_x = 0, nudge_y = 0,  
check_overlap = FALSE, na.rm = FALSE, show.legend = NA,  
inherit.aes = TRUE)
```

### Arguments

```
y~x, df, shade.alpha=0, slices=400,  
palette=colorRampPalette(c("black", "green", "yellow", "red"), bias=5)(2  
family="symmetric"
```





# Over 10.000 Packages!



- ggplot2

- gdal

- bayess

- reshape

- animation

- Mass