R and R Studio

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Obtain R & RStudio

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

https://www.r-project.org/

License: GNU General Public License (The GNU General Public License is a widely used free software license, which guarantees end users the freedom to run, study, share and modify the software.)

Pricing: Free

https://www.rstudio.com/

License: AGPL v3 (The AGPL v3 is an open-source license that guarantees the freedom to share and change the software, and to make sure it remains free software for all its users)

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/antonellosalis/R_training;
Save and unzip the content on your computer.

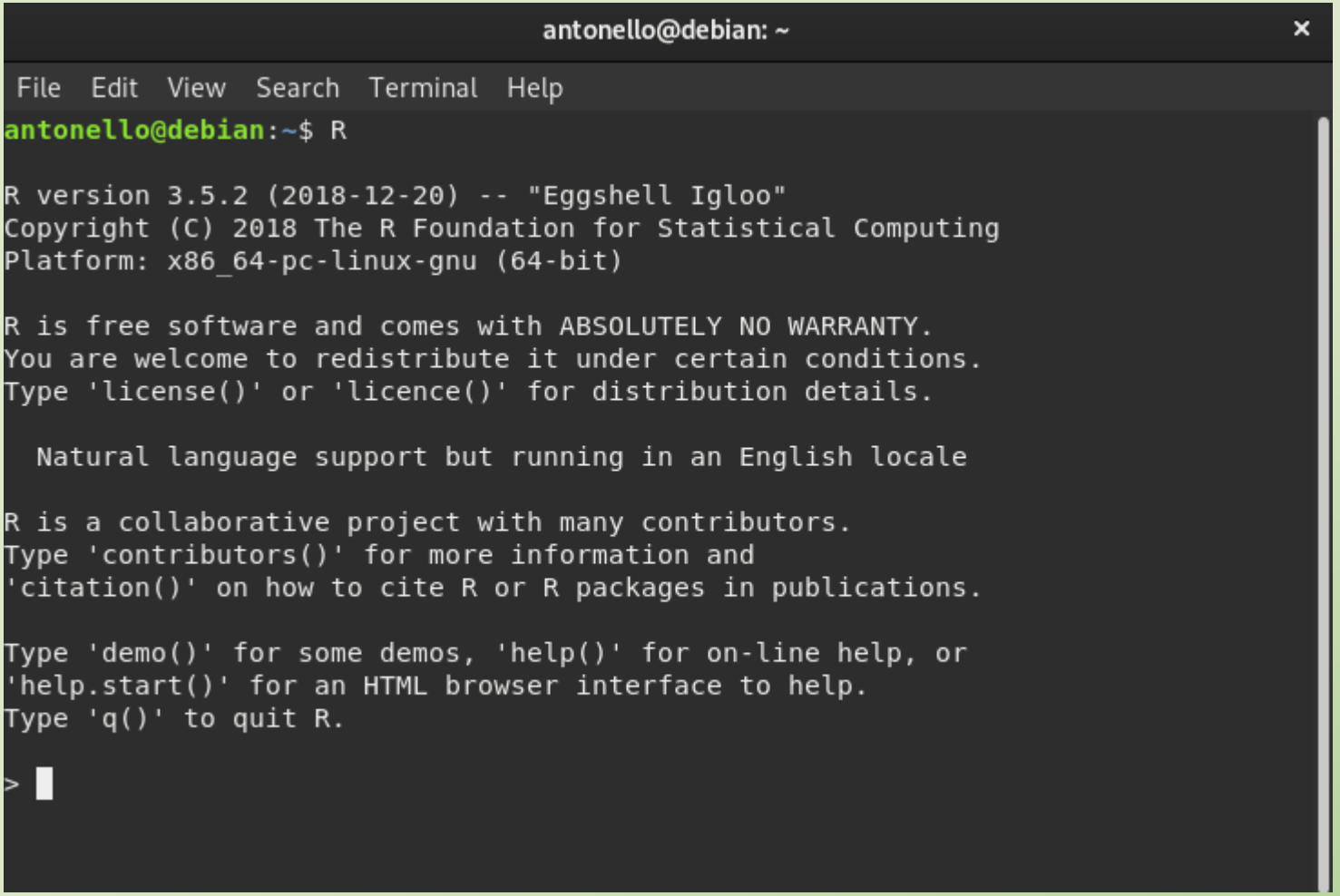
Yes

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

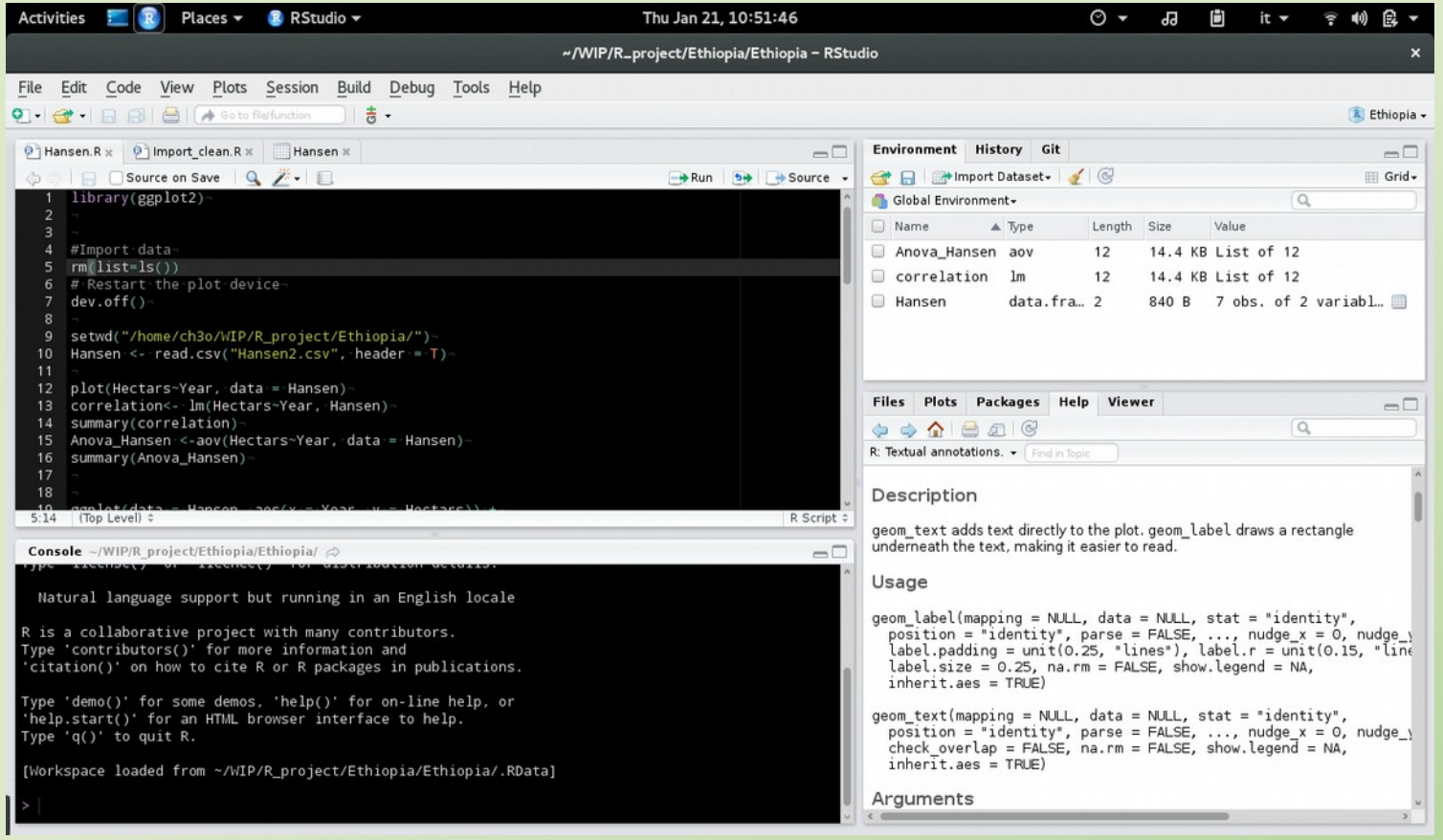
No

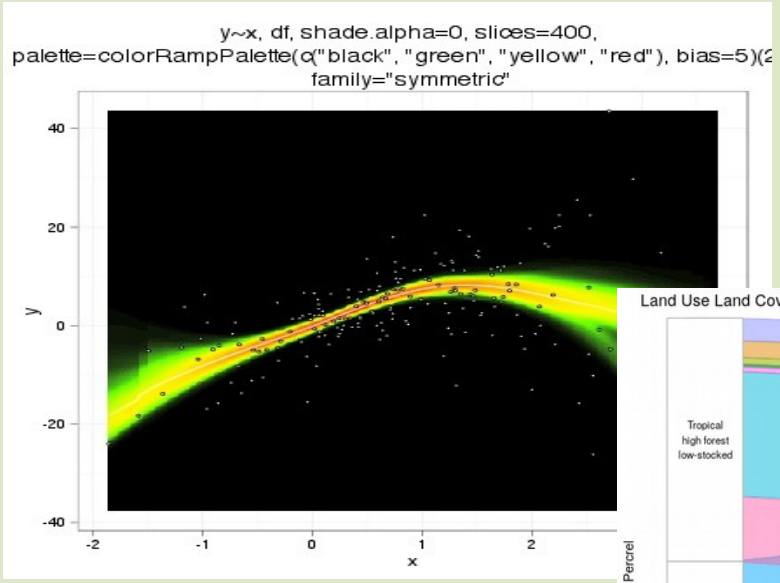
- is not a database, but connects to DBMSs
- no professional / commercial support

How R looks like



How R in RStudio looks like

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family="symmetric"
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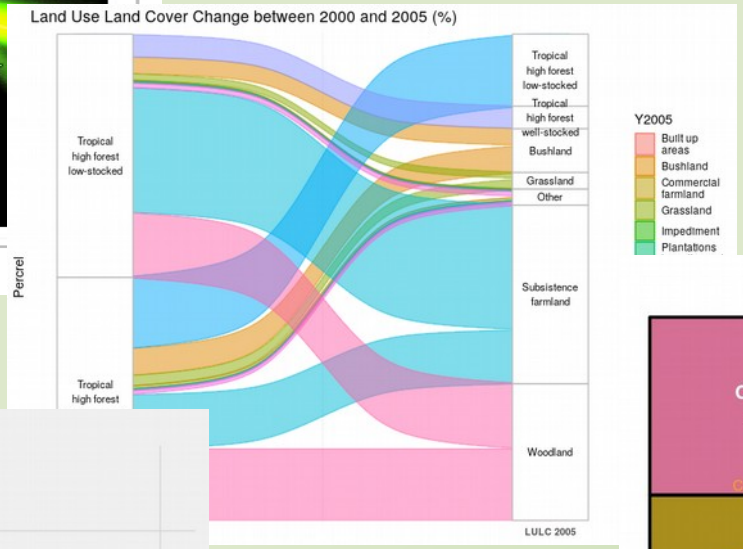
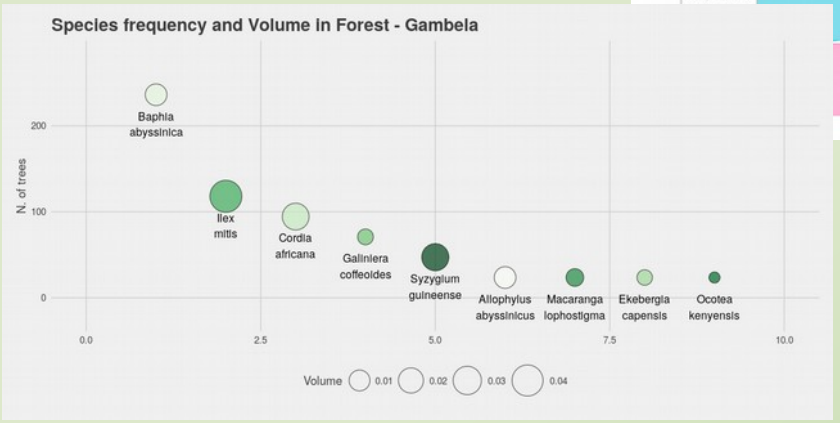
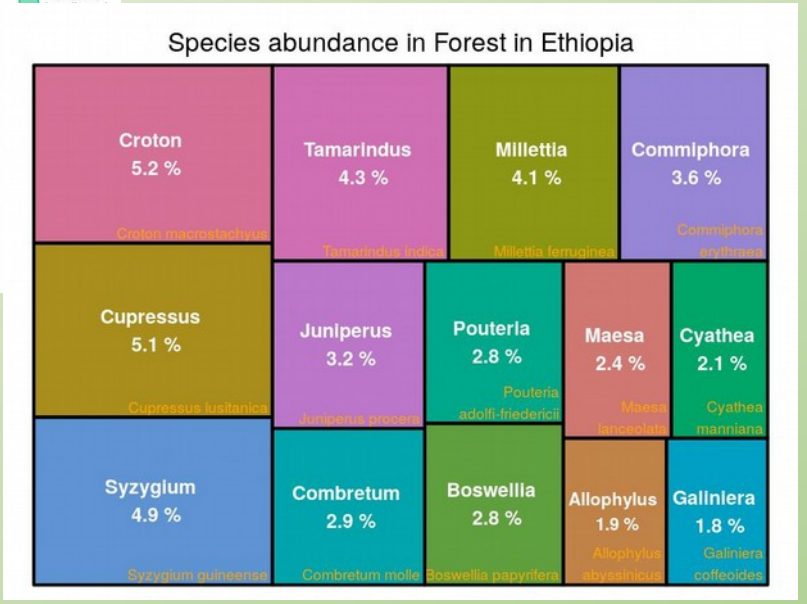
20
0
-20
-40
y
-2
-1
0
1
2
x


Land Use Land Cover Change between 2000 and 2005 (%)
Tropical high forest low-stocked
Tropical high forest
Percrel
Tropical high forest low-stocked
Tropical high forest well-stocked
Bushland
Grassland
Other
Subsistence farmland
Woodland
LULC 2005
Y2005
Built up areas
Bushland
Commercial farmland
Grassland
Impediment
Plantations


Species frequency and Volume in Forest - Gambela
N. of trees
200
100
0
Baphia abyssinica
Ilex mitis
Cordia africana
Galiniera coffeoides
Syzygium guineense
Allophylus abyssinicus
Macaranga lophostigma
Ekebergia capensis
Ocotea kenyensis
0.0
2.5
5.0
7.5
10.0
Volume
0.01
0.02
0.03
0.04


Species abundance in Forest in Ethiopia
Croton
5.2 %
Croton macrostachyus
Tamarindus
4.3 %
Tamarindus indica
Millettia
4.1 %
Millettia ferruginea
Commiphora
3.6 %
Commiphora erythraea
Cupressus
5.1 %
Cupressus lusitanica
Juniperus
3.2 %
Juniperus procera
Pouteria
2.8 %
Pouteria adolfi-friedericii
Maesa
2.4 %
Maesa lanceolata
Cyathea
2.1 %
Cyathea manniana
Syzygium
4.9 %
Syzygium guineense
Combretum
2.9 %
Combretum molle
Boswellia
2.8 %
Boswellia papyrifera
Allophylus
1.9 %
Allophylus abyssinicus
Galiniera
1.8 %
Galiniera coffeoides

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