The open Teach-R project workshop: **creating *fun* R courses!**

moz://a festival

Marcos Vital
UFAL, Brazil

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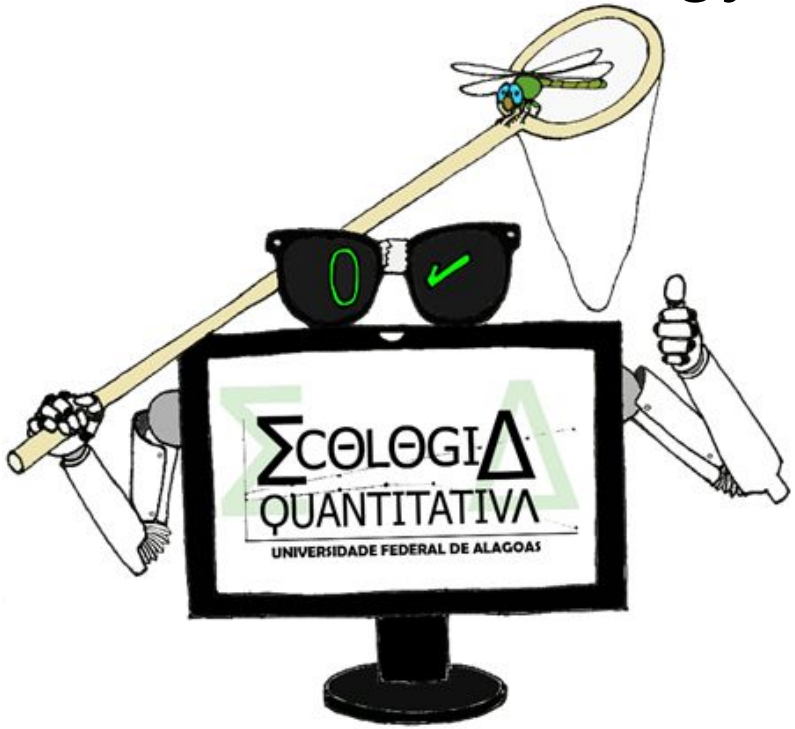
About us

Quantitative ecology lab



Why am I here?!

moz://a

Open Leaders

“Build, gather and organize courseware for anyone willing to offer a R based course for biological sciences students and researchers”

About this session

- A little bit more about R and teaching it ‘blah blah blah’
- Discussion and writing down
- Summarize and next steps

Little bit more on R

The R Project for Statistical Computing

- Open source.
- Good for reproducible analysis.
- Notebooks, blog posting, manuscripts…
- Tons of ready to use functions for statistics!

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 + Open Science =

Brazilian undergrads on Biology

- Poor math and statistics prep from high school. :(
- No programming logic background. D:
- Difficulties, fear and even hate towards learning that! :O

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My two takes on teaching R and biostats

- Avoid technical details at first.
- Jump straight to practical stuff!

Technical details, that's what I'm talking about:

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Going for practical stuff!

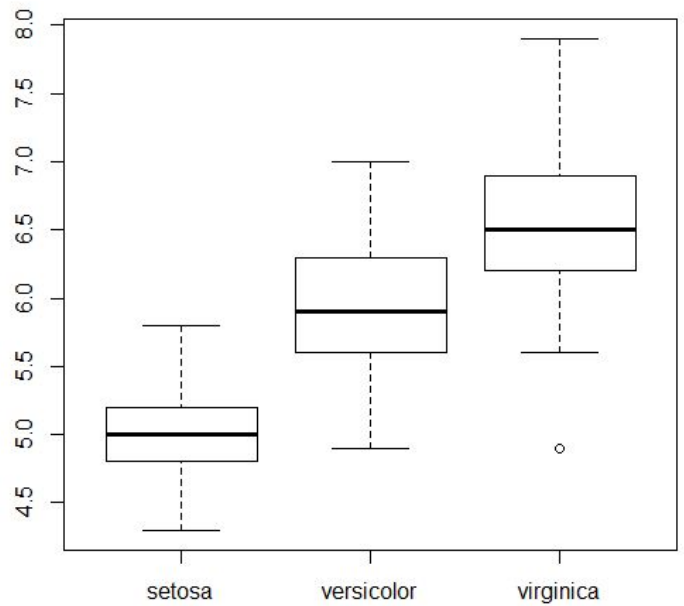
Sem nome - Editor R

```
#Loading example data:
data(iris)

#Taking a quick look at it:
summary(iris)

#Creating a simple boxplot:
boxplot(Sepal.Length~Species, data=iris)
```

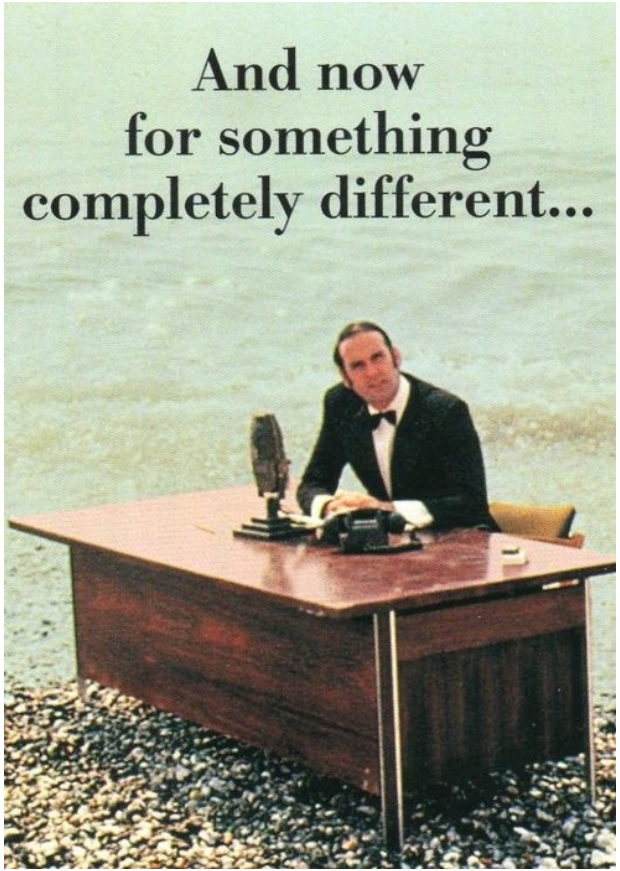
R Console

```
> summary(iris)
  Sepal.Length    Sepal.Width     Petal.Len
 Min.   :4.300   Min.   :2.000   Min.   :1.
 1st Qu.:5.100   1st Qu.:2.800   1st Qu.:1.
 Median :5.800   Median :3.000   Median :4.
 Mean   :5.843   Mean   :3.057   Mean   :3.
 3rd Qu.:6.400   3rd Qu.:3.300   3rd Qu.:5.
 Max.   :7.900   Max.   :4.400   Max.   :6.
>
```

R Graphics: Device 2 (ACTIVE)

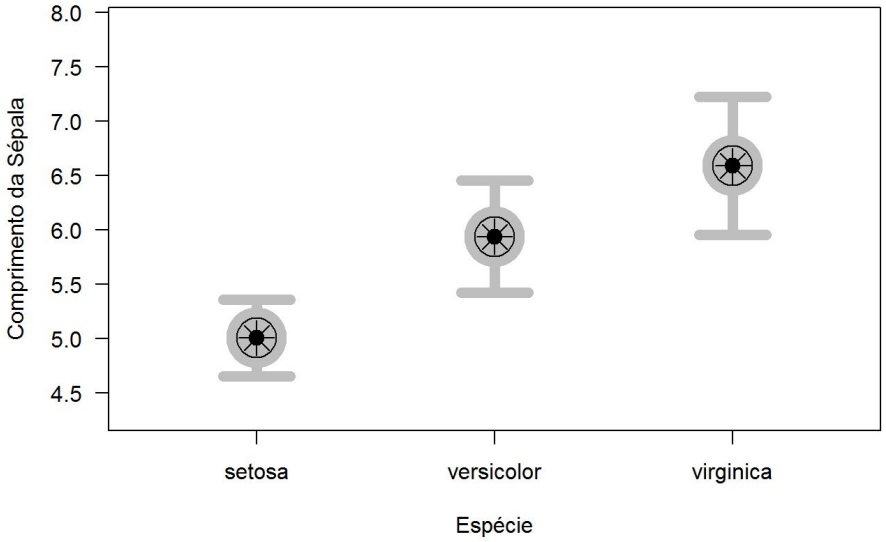


On this session: a third path

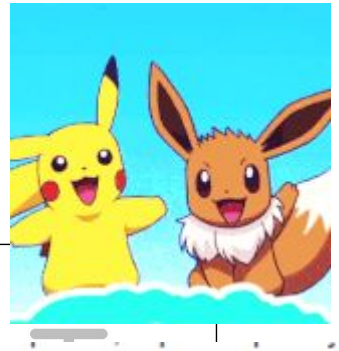


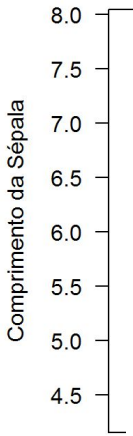
Cool, funny, unexpected examples and usages!

For something completely different...



For something completely different...

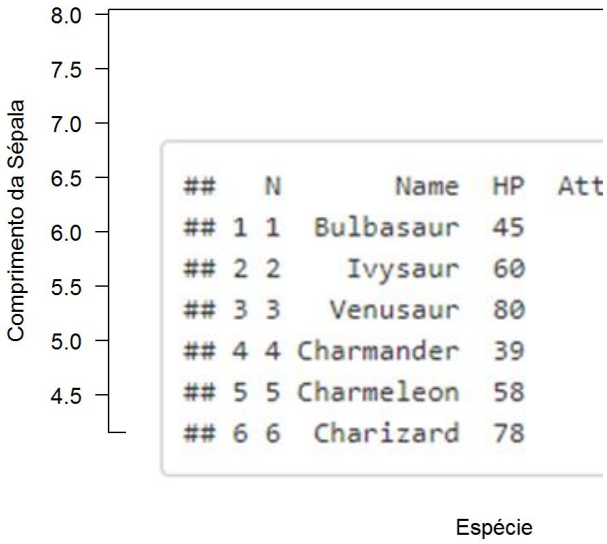




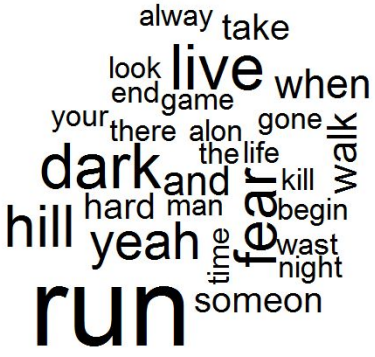
##	N	Name	HP	Attack	Defense	Speed	Special	Total	Average
## 1	1	Bulbasaur	45	49	49	45	65	253	50.6
## 2	2	Ivysaur	60	62	63	60	80	325	65.0
## 3	3	Venusaur	80	82	83	80	100	425	85.0
## 4	4	Charmander	39	52	43	65	50	249	49.8
## 5	5	Charmeleon	58	64	58	80	65	325	65.0
## 6	6	Charizard	78	84	78	100	85	425	85.0

Espécie

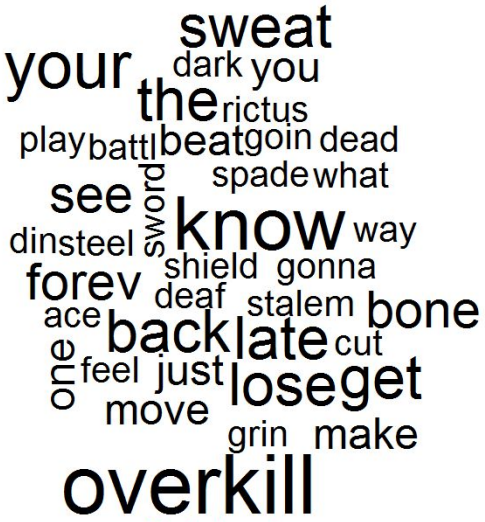
For something completely different...




```
##   N       Name  HP  Att
## 1 1  Bulbasaur  45
## 2 2    Ivysaur  60
## 3 3   Venusaur  80
## 4 4 Charmander  39
## 5 5 Charmeleon  58
## 6 6  Charizard  78
```

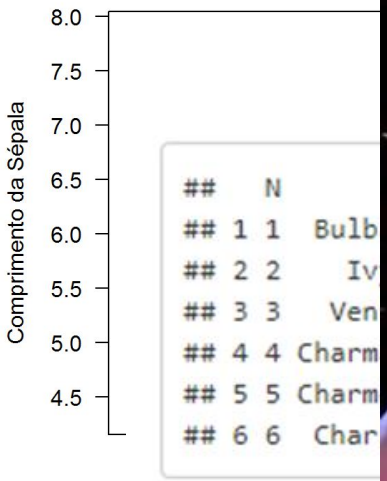


Iron Maiden

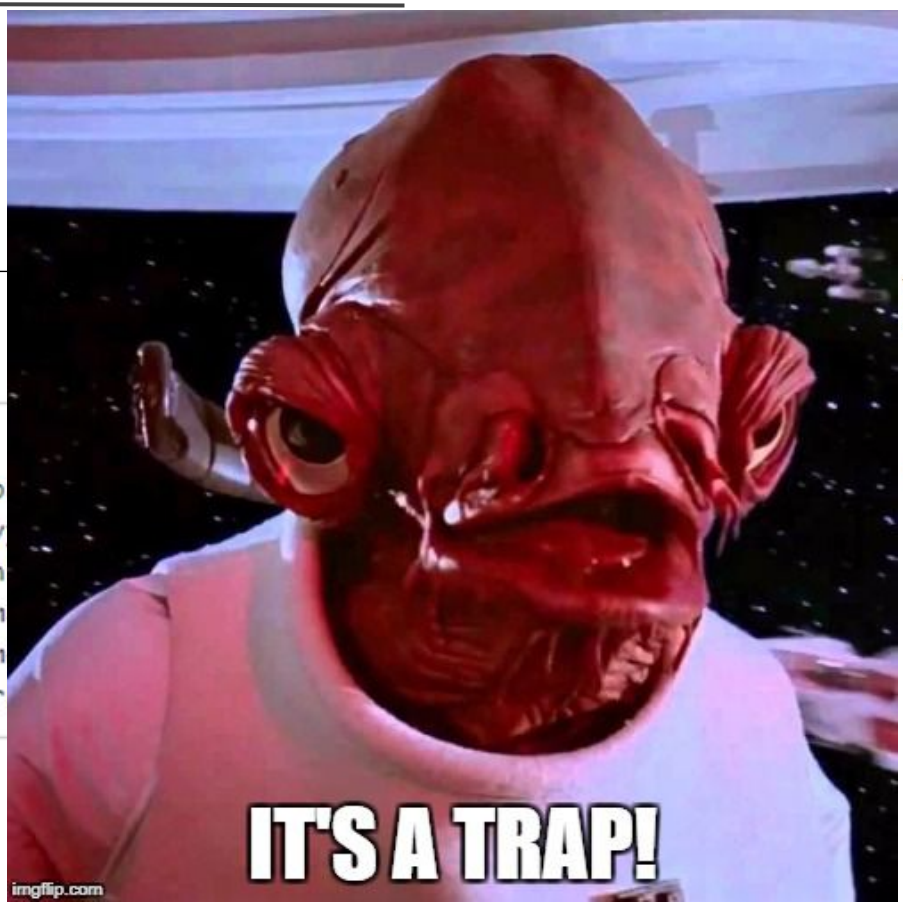


Motorhead

For something completely different...




```
##   N
## 1 1  Bulb
## 2 2    Iv
## 3 3   Ven
## 4 4 Charm
## 5 5 Charm
## 6 6  Char
```



What I would like for you to do now:

Three groups:

- What are the major barriers for learning or teaching R?
- What are the most important stuff to learn or teach about it?
- What kind of cool and unexpected examples we should use?

So, what's next?

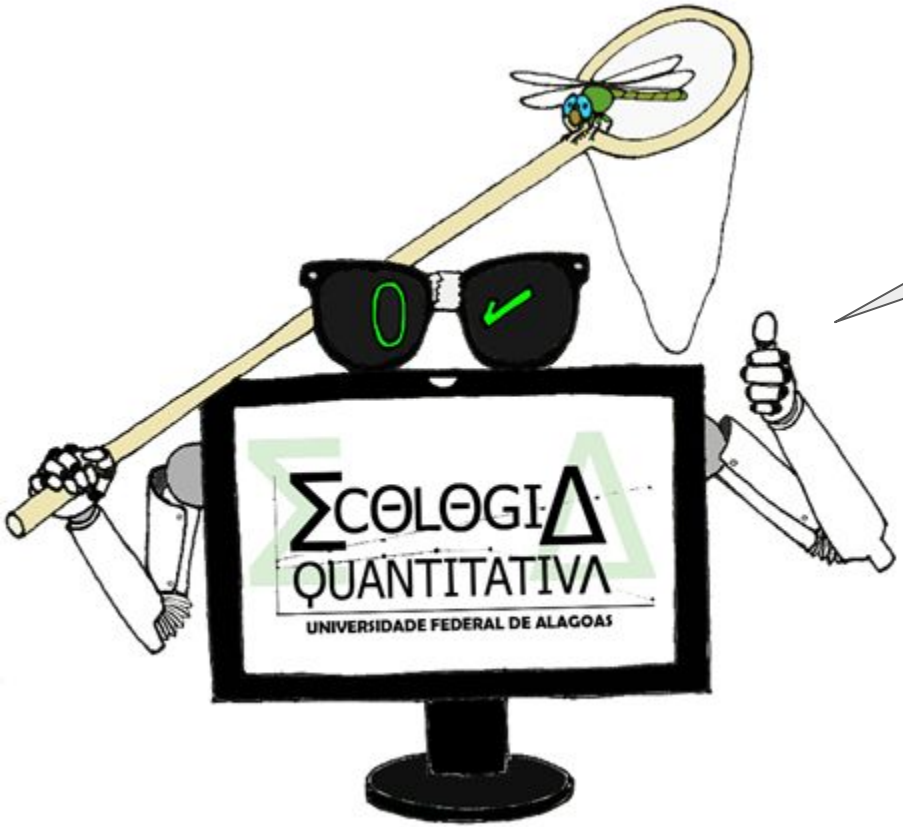
- Teach-R project repo here:
github.com/marcosvital/teach-R-project

- New repo for fun stuff here:
github.com/marcosvital/teach-r-fun

- Report about this session coming soon!

- Write me: **marcosvital at gmail.com**
- Or tweet me: **@marcosvcvital**

I love you all! :3



Thank you!