speak visually!
data visualization in R with ggplot2

Judit Mokos | mokjud@gmail.com
please close your eyes
what makes a good figure good?
what makes a good figure good?

data
intuitive
simply, but enough
information
clear and pretty
piechart is forbidden
2D
right colors and shapes
message
what makes a bad figure bad?
Gun deaths in Florida

Number of murders committed using firearms

2005 Florida enacted its ‘Stand Your Ground’ law

Source: Florida Department of Law Enforcement

C. Chan 16/02/2014
LOOKING DOWN ON THE REST OF THE WORLD
(Average male height in m)

The Netherlands | USA | Canada | England | India | Philippines

1.85 | 1.80 | 1.75 | 1.70 | 1.65 | 1.60
DELINCUENCIA

Victimización (hogares víctimas de delitos en 12 meses)

2010: 30,7%
2013: 22,8%
2016: 27,3%
this is Pinera
this is Pinera and he won the Chilean election.
he is Pinera and he won the Chilean election.
is the crime rate in Boston dependent on the weather?
is the crime rate in Boston dependent on the weather?

collected data:
• 7 july 2012 – 26 february 2017 every day
• date
• number of crimes per day
• the type of the crimes
• average, minimum, maximum temperature
• snow
• rain
• any unusual events
is the crime rate in Boston dependent on the weather?

make a graph by hand!

collected data:
- 7 July 2012 – 26 February 2017 every day
- date
- number of crimes per day
- the type of the crimes
- average, minimum, maximum temperature
- snow
- rain
- any unusual events
such a beauty
I wanna do the same
so cool
very pretty
much graph
Download: github.com/mokjud/speak-visually

Open RStudio
please forget the syntax of R
ggplot(data, aes(x, y, color, fill)) +
geom_point() + geom_smooth, geom_line, geom_boxplot, geom_hist
scale_x_discrete(values, breaks, labels, name) + scale_y, scale_color, scale_fill, scale_x_continuous, scale_x_manual, scale_x_date
labs(title, x, y)
theme_minimal()
data type, long format
are basketball players really tall?

challenge!

collected data:
• heights of professional basketball players
• heights of professional football players

work in groups
• use the right figure-type
• use nice colors
• use title and axis labels
lets play with R
download a dataset,
choose a question, or
make a question, or
play with your own data :)

any questions?
ask me!
thank you for coming!

Judit Mokos
mokjud@gmail.com
@vackorfa