Enhancing graphics

Session 14

PMAP 8921: Data Visualization with R
Andrew Young School of Policy Studies
Fall 2023

Typical publication workflow

Create plot in R and ggplot2

Export plot as a vector

Edit the vector in an external program
to make it match in-house style
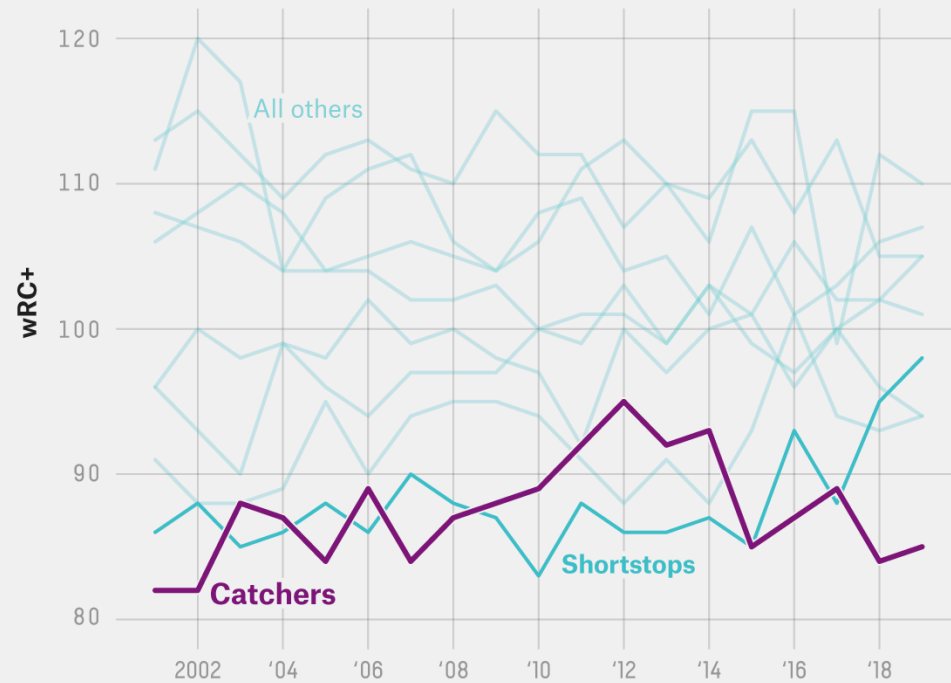(or just be fancy and well-designed in general)

or

Extract parts of the vector for use in Javascript for interactivity

In-house styles

Catchers have taken over as the worst hitters in baseball
Offensive efficiency, as measured by weighted runs created plus (wRC+), by position in MLB since 2001
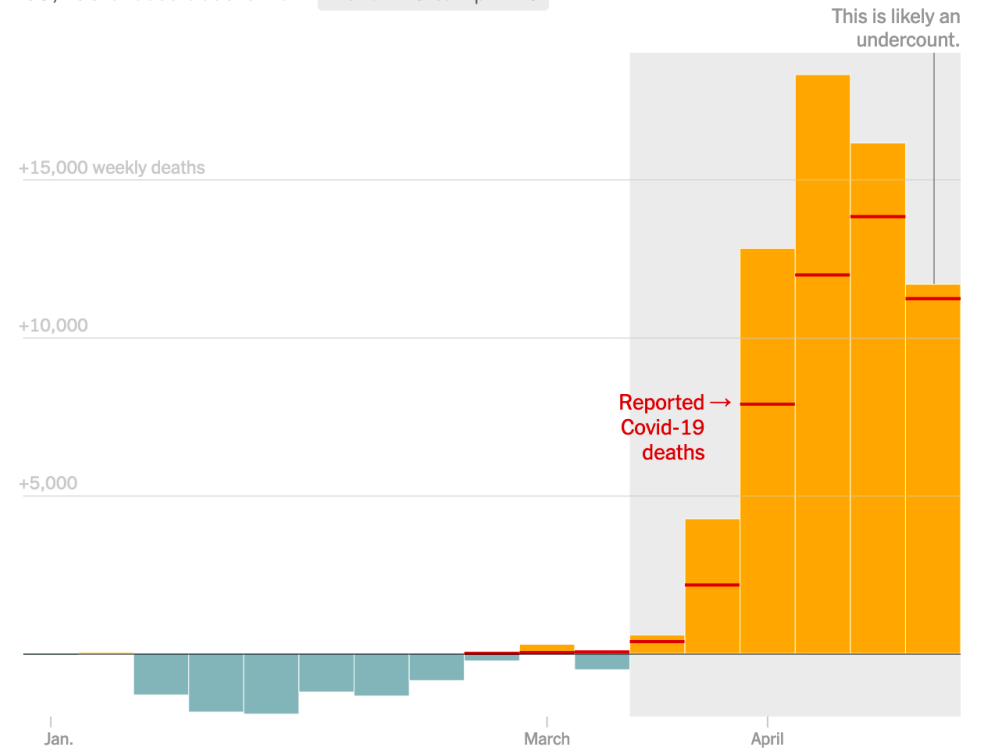
All others

wRC+

120

110

100

90

80

Catchers

Shortstops

2002 '04 '06 '08 '10 '12 '14 '16 '18

FiveThirtyEight   SOURCE: FANGRAPHS

U.S. Deaths Above or Below Normal
63,700 excess deaths from March 15 to April 25

This is likely an undercount.

+15,000 weekly deaths

+10,000

Reported → Covid-19 deaths

+5,000

Jan.   March   April

Note: The chart shows the difference between measured deaths and expected deaths each week. Overall deaths above the expected number are considered to be "excess deaths." This chart does not include eight states with unreliable data.
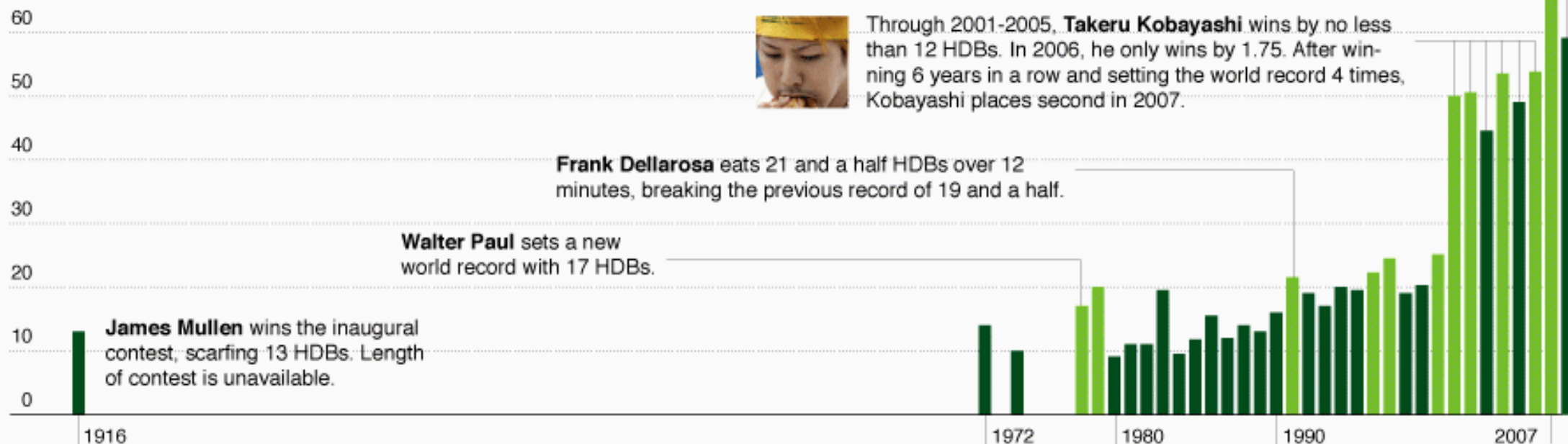
Hot dogs

Winners from Nathan's Hot Dog Eating Contest

It's that time of year again. Since 1916, the annual eating competition has grown substantially attracting competitors from around the world.

70 Hot dogs and buns (HDBs) ■ NEW WORLD RECORD

For the first time since 1999, an American reclaims the title when **Joey Chestnut** consumes 66 HDBs, a new world record. Chestnut repeats in 2008.

Through 2001-2005, **Takeru Kobayashi** wins by no less than 12 HDBs. In 2006, he only wins by 1.75. After winning 6 years in a row and setting the world record 4 times, Kobayashi places second in 2007.

Frank Dellarosa eats 21 and a half HDBs over 12 minutes, breaking the previous record of 19 and a half.

Walter Paul sets a new world record with 17 HDBs.

James Mullen wins the inaugural contest, scarfing 13 HDBs. Length of contest is unavailable.

1916   1972   1980   1990   2007

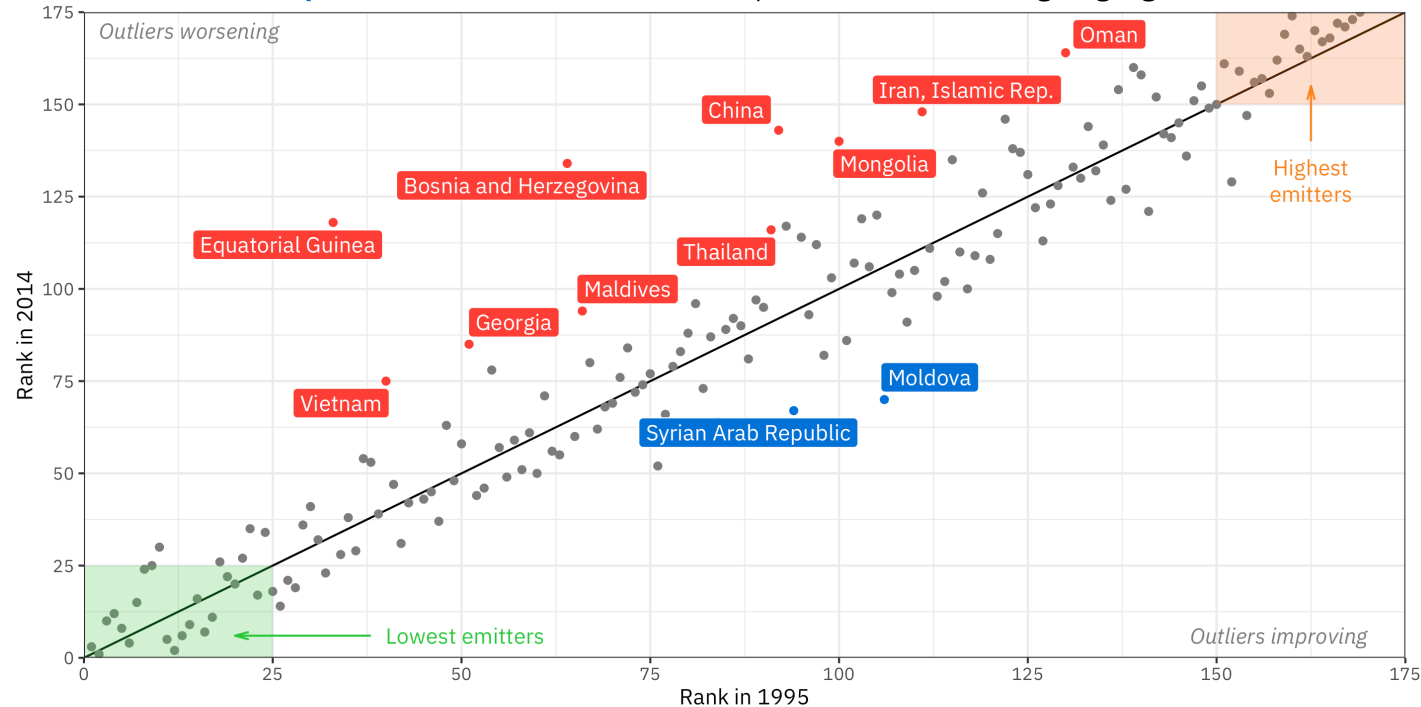*Data between 1916 and 1972 were unavailable.   Source: Wikipedia and Nathan's Famous   **FlowingData**

This is all changing though!

This was made 100% in R and ggplot!

Changes in CO_2 emission rankings between 1995 and 2014

Countries that **improved** or **worsened** more than 25 positions in the rankings highlighted

Source: The World Bank.
Countries with populations of less than 200,000 excluded.

The way of the future

{patchwork} and {ggtext}
are removing the need to edit
graphs by hand in Illustrator

You can replicate an entire in-house graphic style with R alone nowadays

Interactivity not quite at the same level,
but it's getting there with {plotly}