

# The Gamma Democratizing Data Science

Tomas Petricek, Alan Turing Institute

“In recent years, divergent levels of trust in statistics has become one of the key schisms that have opened up in western liberal democracies.”

**William Davies**  
The Guardian, January 2017

## Open and engaging data-driven storytelling

We are building simple tools that let journalists build transparent and open data visualizations that readers can understand and engage with.

### Accountable

Readers can review what data is used, how it is summarized and uncover misleading uses of data.

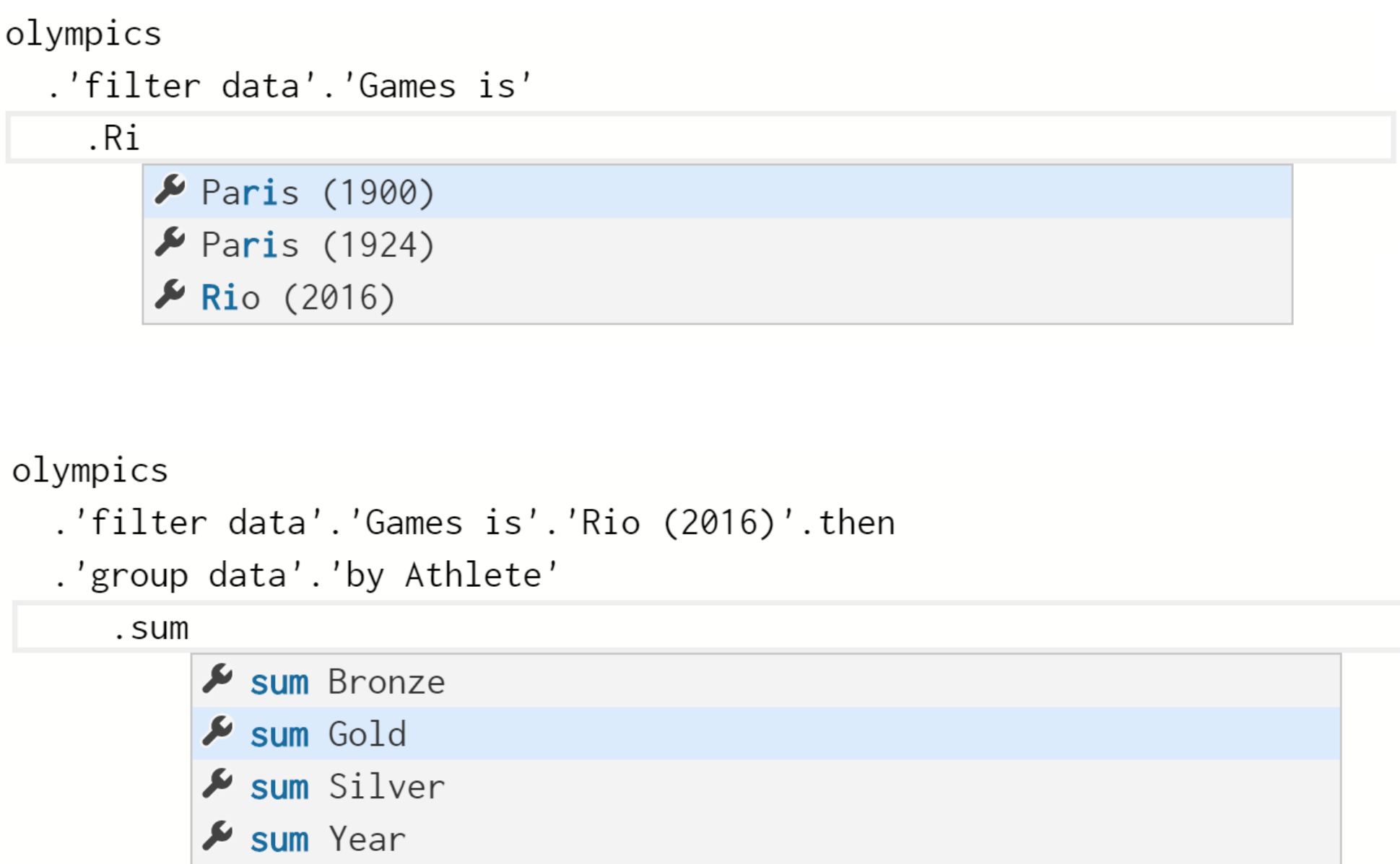
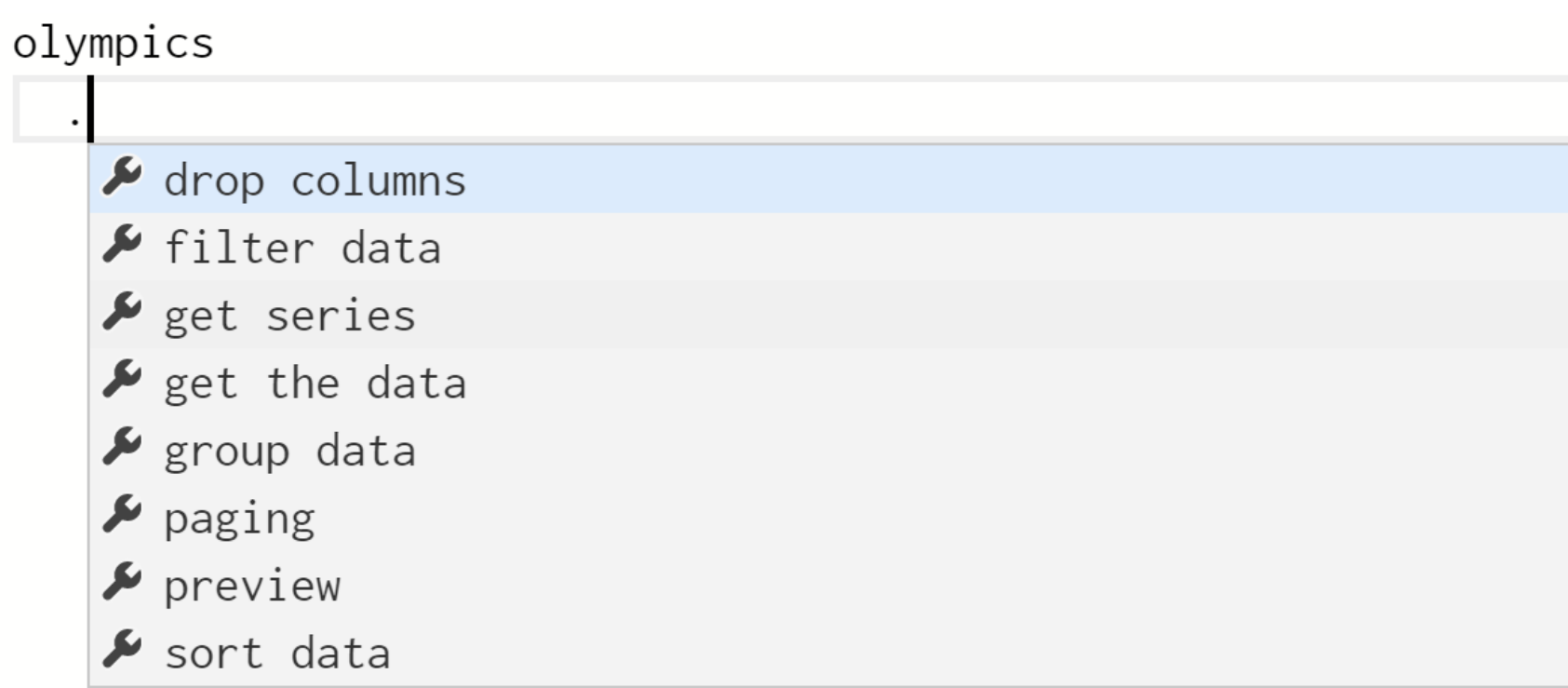
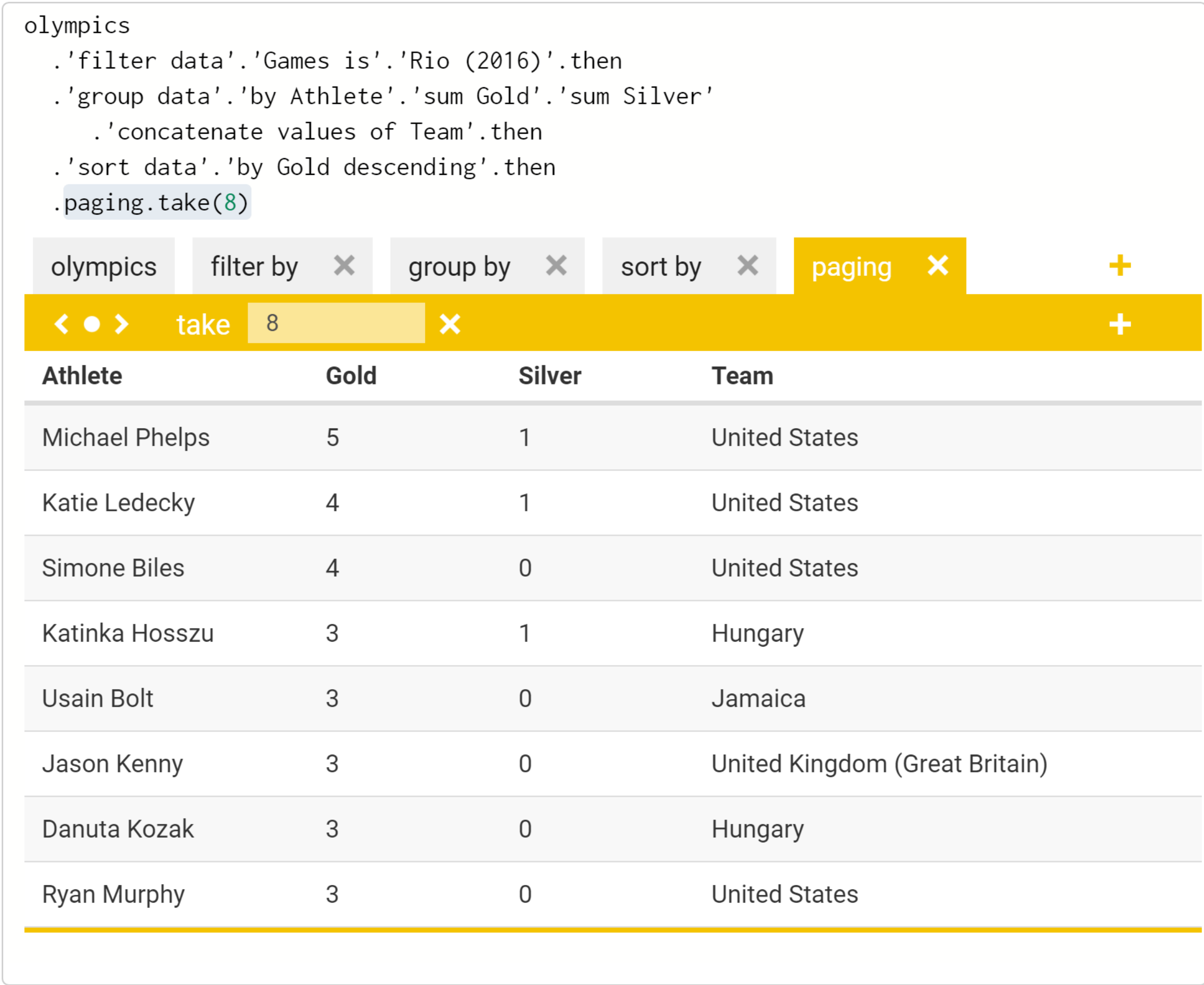
### Reproducible

Readers can run the analysis themselves using primary data sources and recreate the visualizations.

### Engaging

Readers can modify parameters, choose another indicator and explore other aspects of the data.

**Figure 2.** Data transformations can be created and modified in code, but also using a spreadsheet-like user interface. All operations change the source code, so the script remains fully reproducible.



**Figure 3.** Data-aware programming language lets you summarize data just by selecting members from the offered completion lists and guarantees that all scripts created in this way are valid programs.

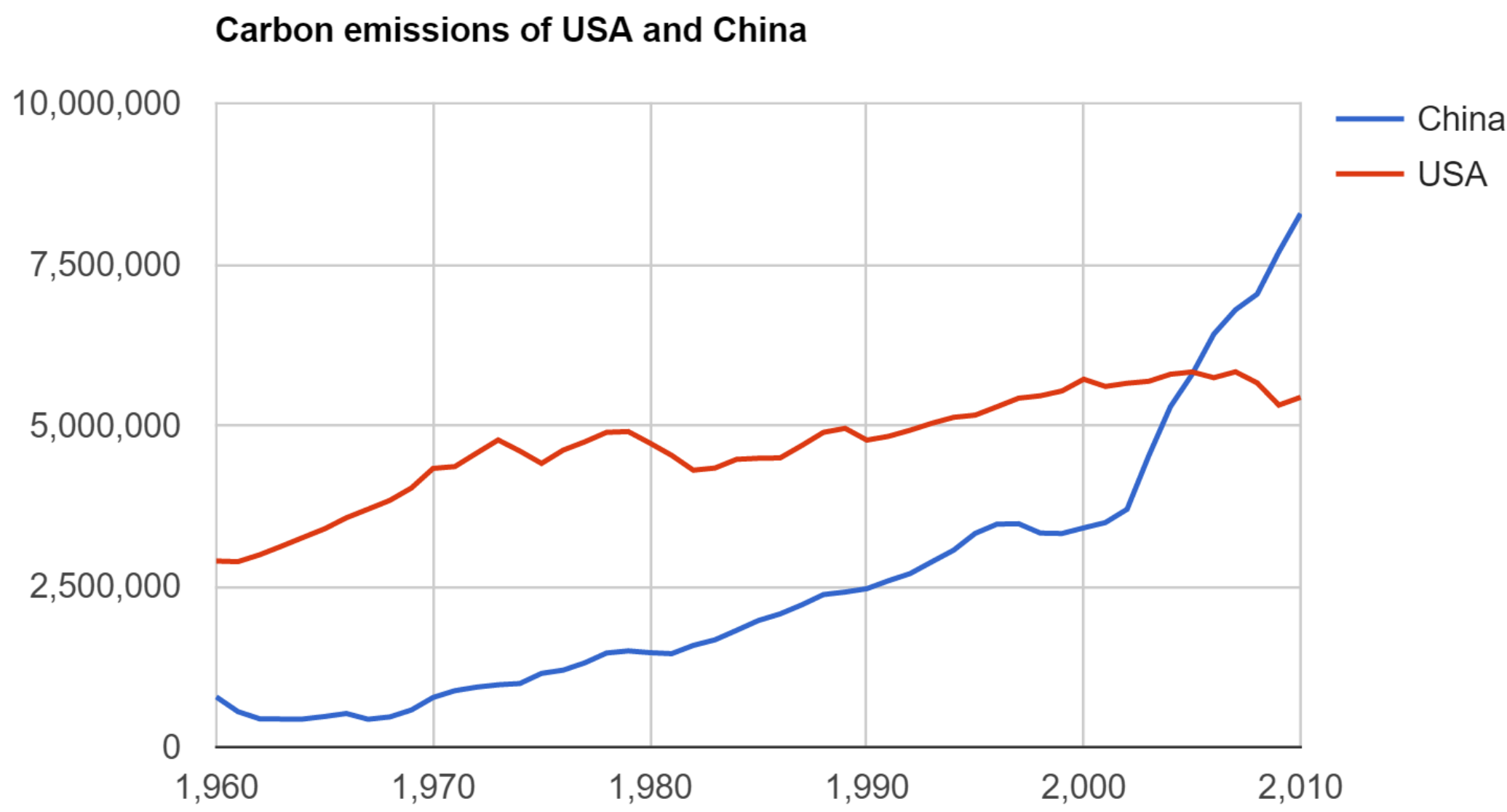
**Figure 1.** Every visualization is backed by simple source code that accesses data from a primary source such as the World Bank, performs further calculations and creates a chart.

```
let china =
  worldbank.byCountry.China.'Climate Change'
  . 'CO2 emissions (kt)'.setProperties(seriesName="China")

let usa =
  worldbank.byCountry.'United States'.'Climate Change'
  . 'CO2 emissions (kt)'.setProperties(seriesName="USA")

chart.lines(series.values([china, usa]))
.set(title="Carbon emissions of USA and China")
```

preview



## Simple programming tools for data exploration

We created a simple web-based scripting language that makes it easy to create open, reproducible and engaging data visualizations.

### Data-aware language

The language understands data and suggests available operations. To write a script, you only need to choose the desired operations.

### Spreadsheet-inspired editor

When writing code, you can see a live preview of the resulting data. You can modify script using code or a simple user interface.

## Research and open-source software

The project combines theoretical programming language innovations with practical open-source development. The Gamma is available as a JavaScript library that anyone can use to build open and engaging visualizations of their own data sets.

Visit the project homepage and follow us for news and updates! <http://thegamma.net> and [@thegamma\\_net](https://twitter.com/thegamma_net)

Read our paper “Data exploration through dot-driven development” <http://tomasp.net/academic/papers/pivot>, In ECOOP 2017

Get the library <http://npmjs.com/package/thegamma-script> and Contribute to the project <http://github.com/the-gamma>



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