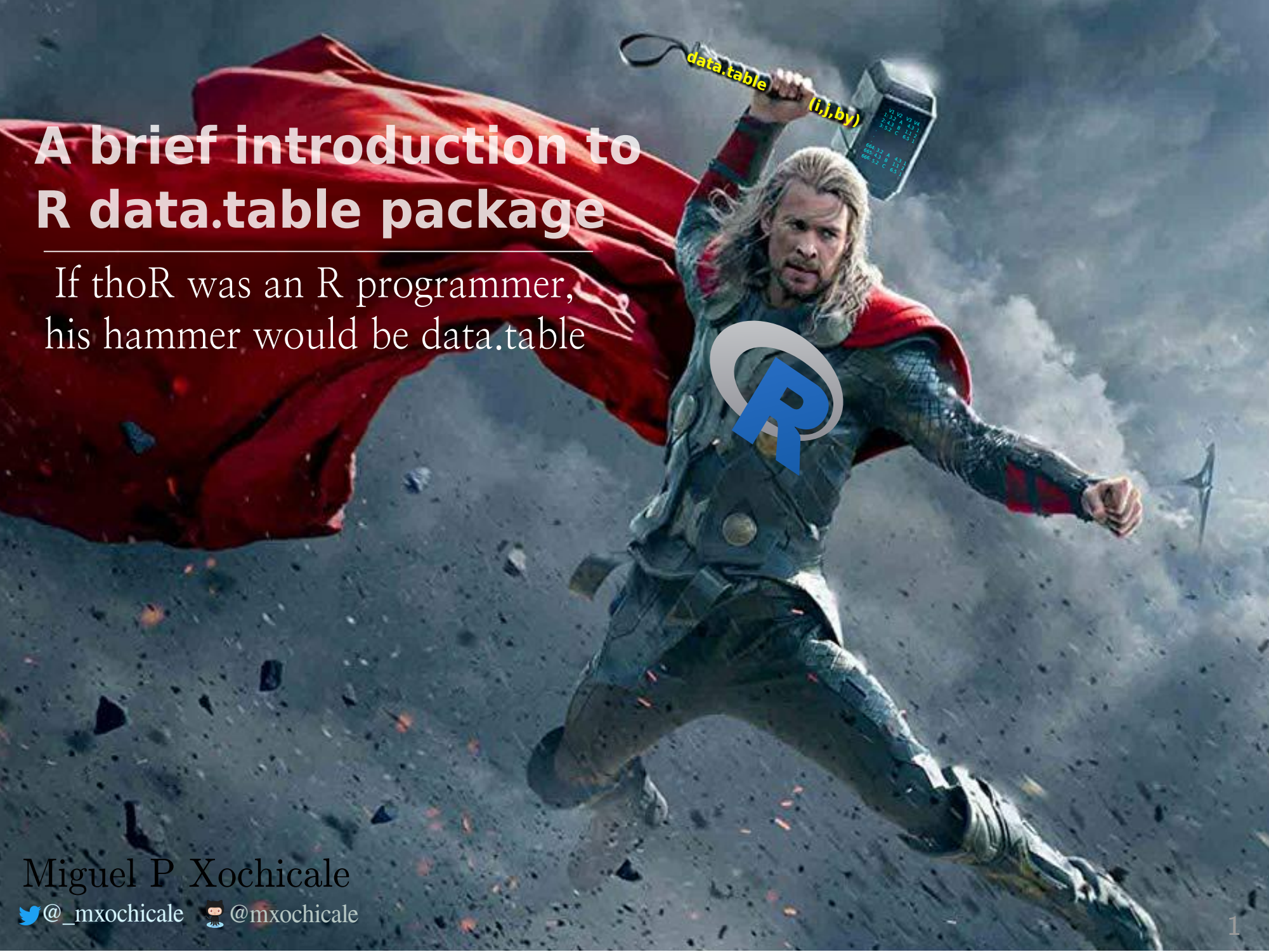
A brief introduction to R data.table package

If thoR was an R programmer, his hammer would be data.table



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This presentation was built in Ubuntu 14.04 x64 with Markdown and Pandoc, and is available at:

- https://github.com/mxochicale/thw-r-datatable

See `README.md` for further information

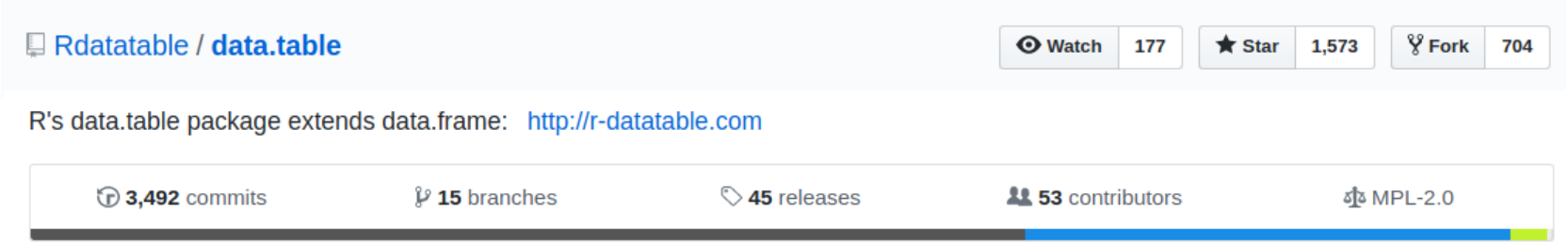
Outline

- What is `data.table`?
- Why bother using `data.table`?
- Basic examples with `data.table`
- Time Series Analysis with `data.table` and `ggplot`
- References

What is `data.table`?

The R `data.table` package extends data.frame. `data.table` allows you to do fast data manipulations (for example, 100GB in RAM). `data.table` goals are reduce both programming time and compute time.

- 678 packages import/depend/suggest `data.table` (543 CRAN + 135 Bioconductor)
- Github: https://github.com/Rdatatable/data.table

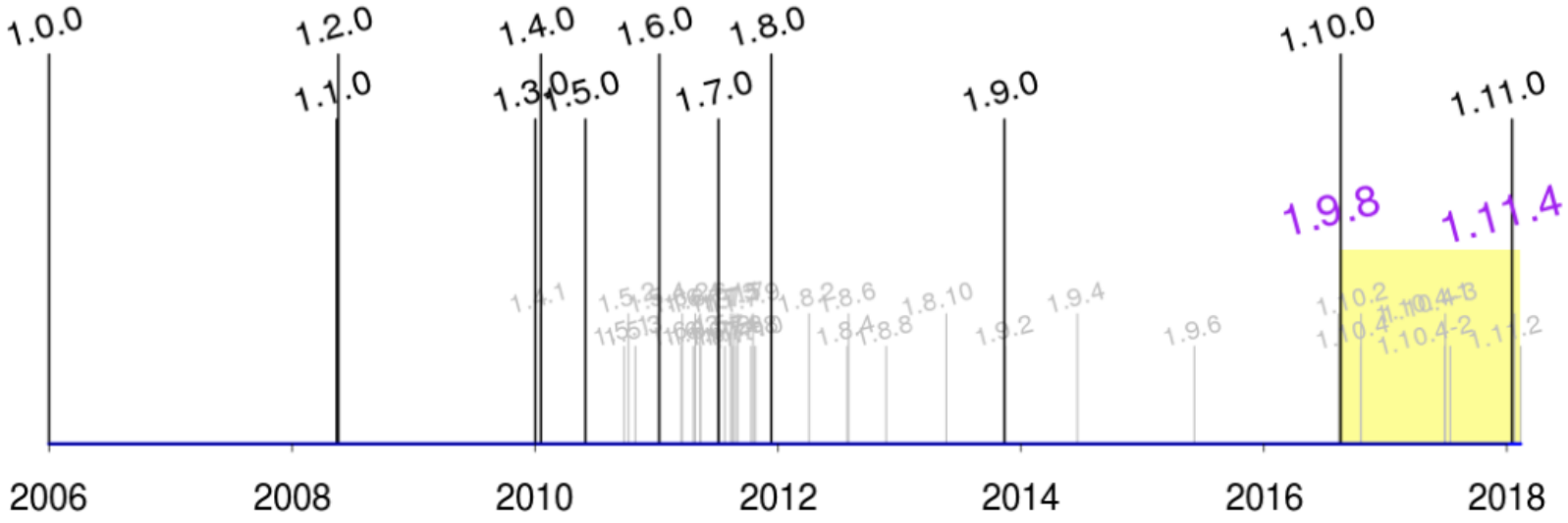


Why bother using `data.table`?

The R `data.table` package is 12 years old

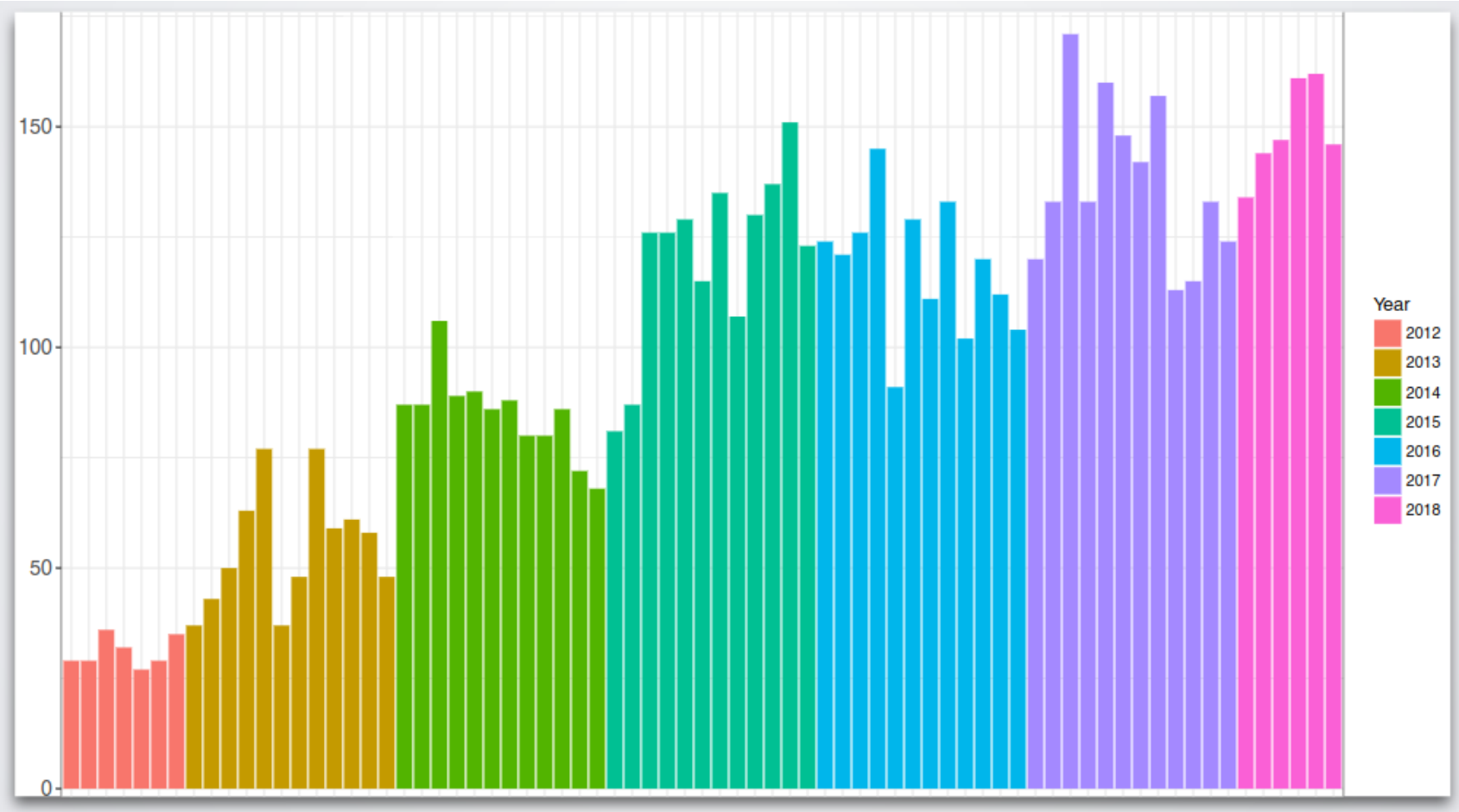
- More than 35 releases of `data.table` since 2006 on CRAN
- 45 releases of `data.table` in Github

`data.table` development timeline:



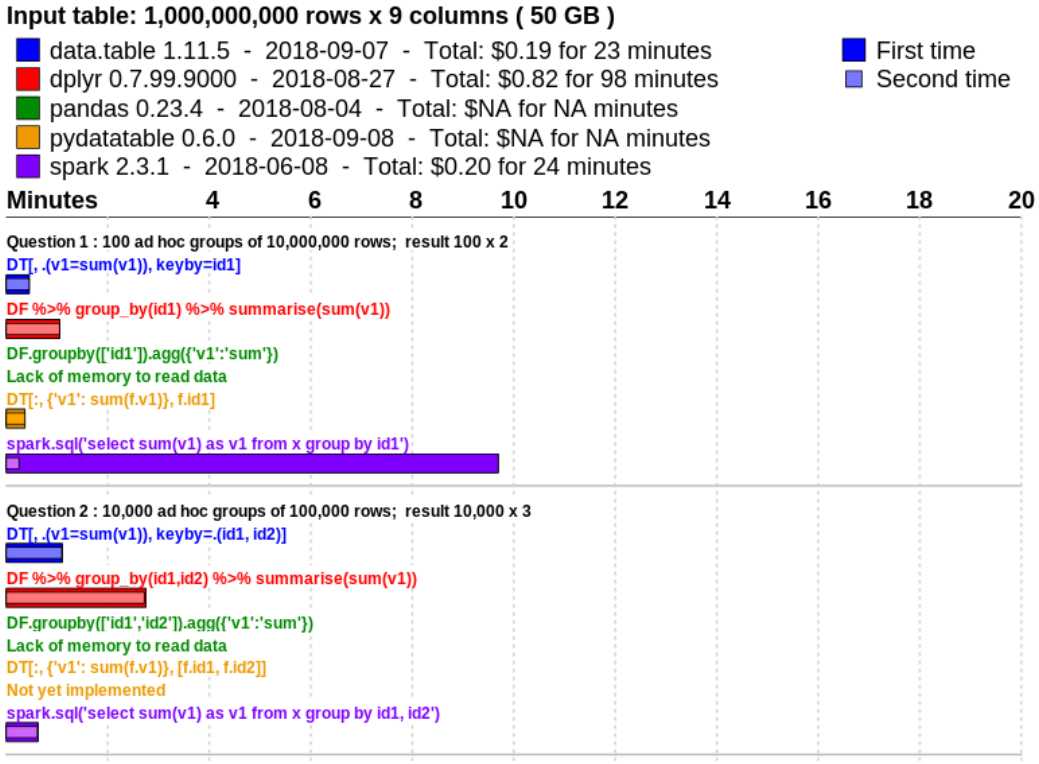
What's new in data.table, (Jan Gorecki, 2018.07)

Stack Overflow Questions from 2012-2018



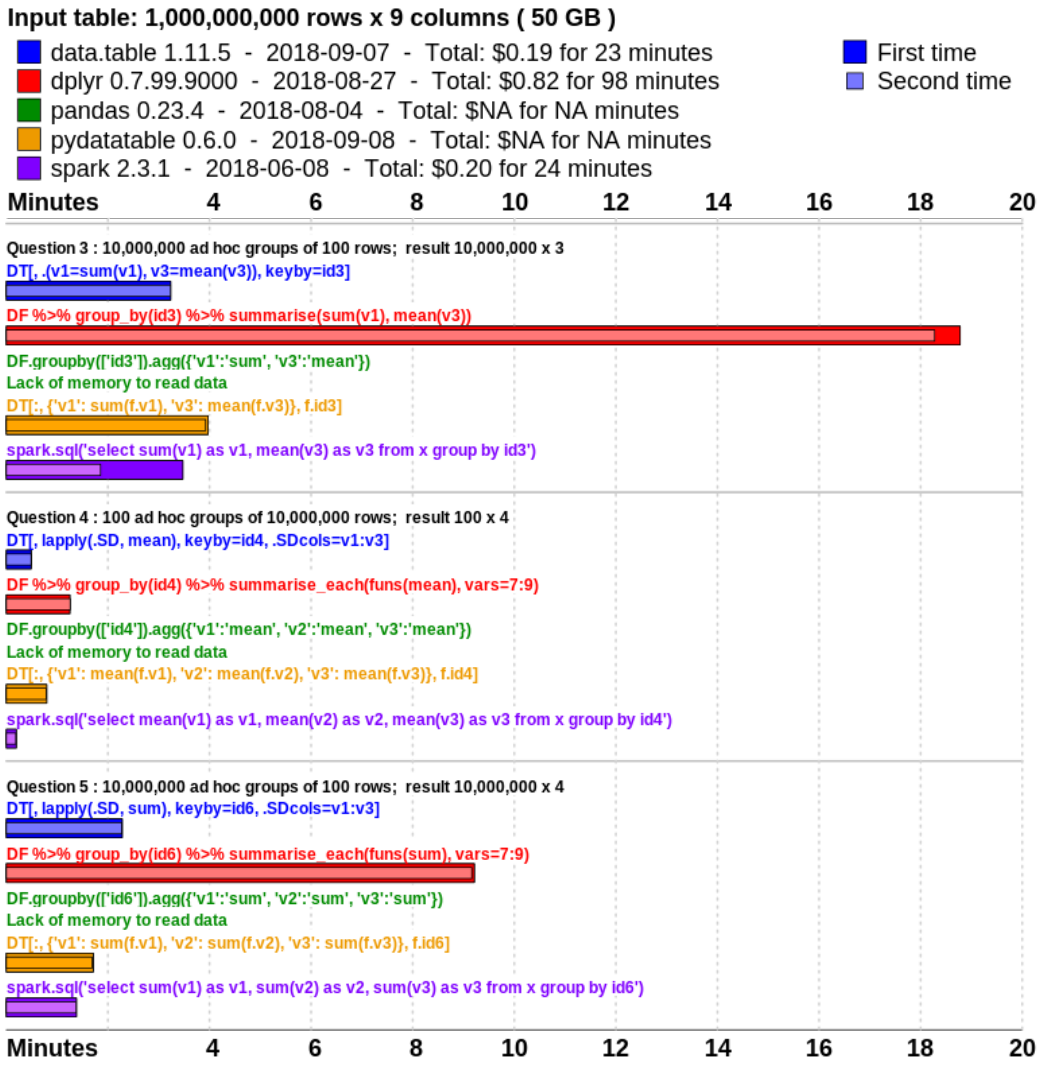
12 years of data.table, (Arun Srinivasan, 2018.07)

Grouping benchmarks (2018)



h2oai.github.io/db-benchmark

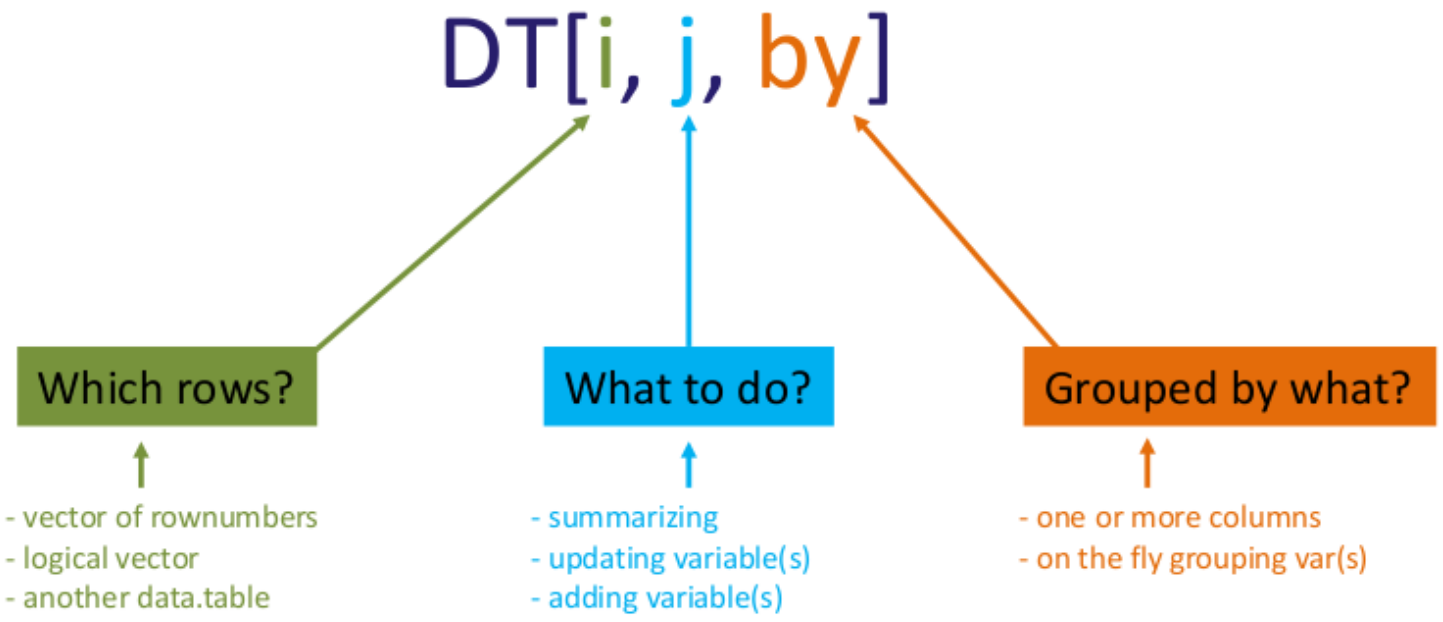
Grouping benchmarks (2018)



h2oai.github.io/db-benchmark

Basic examples with `data.table`

General form



tutorial uRos (walhouti, 2018)

Examples

```
00-lib-dependencies.R
01-basics.R
02-counts.R
03-aggregating.R
04-group-by.R
05-group-by-SD.R
06-updating-variables.R
07-adding-variables.R
08-deleting-variables.R
09-joining-datasets.R
```

Examples with `data.table` and `ggplot`

Examples

```
01-scatterplot.R
02-boxplot.R
03-histogram.R
04-densitycurve.R
05-addingsmoothers.R
06-faceting.R
```

References

- https://github.com/Rdatatable/data.table/wiki
- https://github.com/arunsrinivasan/user2017-data.table-tutorial
- https://www.datacamp.com/courses/data-table-data-manipulation-r-tutorial
- https://www.datacamp.com/community/tutorials/data-table-cheat-sheet
- https://h2oai.github.io/db-benchmark/