Parquet files for large (and big) data dissemination

Romain Lesur
INSEE (France)

2023-11-22

We tried Parquet for bulk data dissemination…

Detailed results of the Census requested with DuckDB

...and our users loved it!

What is Parquet?

- A big data file format created in 2013
- Open source (Apache Foundation)
- Optimised for analytics workloads (OLAP)
  - Columnar-oriented
  - Efficient compression

Parquet files are easy to create

A file format supported by a large ecosystem

Create a Parquet file with a simple command!

available in R, Python, Rust, Java, JavaScript, C#, C++...

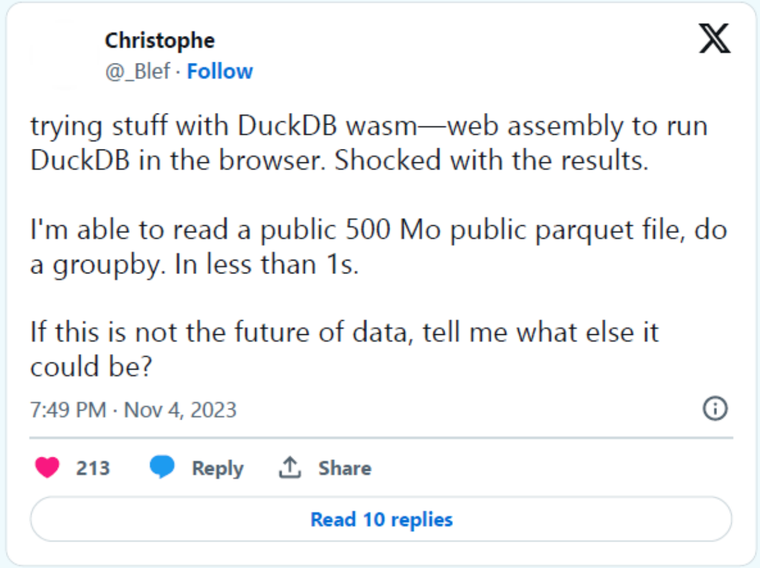
Parquet files are easy to use

Requests are efficient

Only the required chunks of data are read

With DuckDB, Parquet files can be requested over the web

No need to download the whole file!



Parquet as a default file format for dissemination?

- Parquet can handle any size of data
  (small, large and big)
- Adopted as INSEE's internal default file format, replacing SAS format (SAS7BDAT)
- Our experiment for bulk data dissemination was a great success!

Is it the future of open data?

FMI, read Robin Linacre's post "Why parquet file are my preferred API for bulk open data?"